Dermatopathology Case study 1

Muhammad Zain., MD. FRCPath.
Al-Azhar University School of Medicine
Cairo, Egypt.

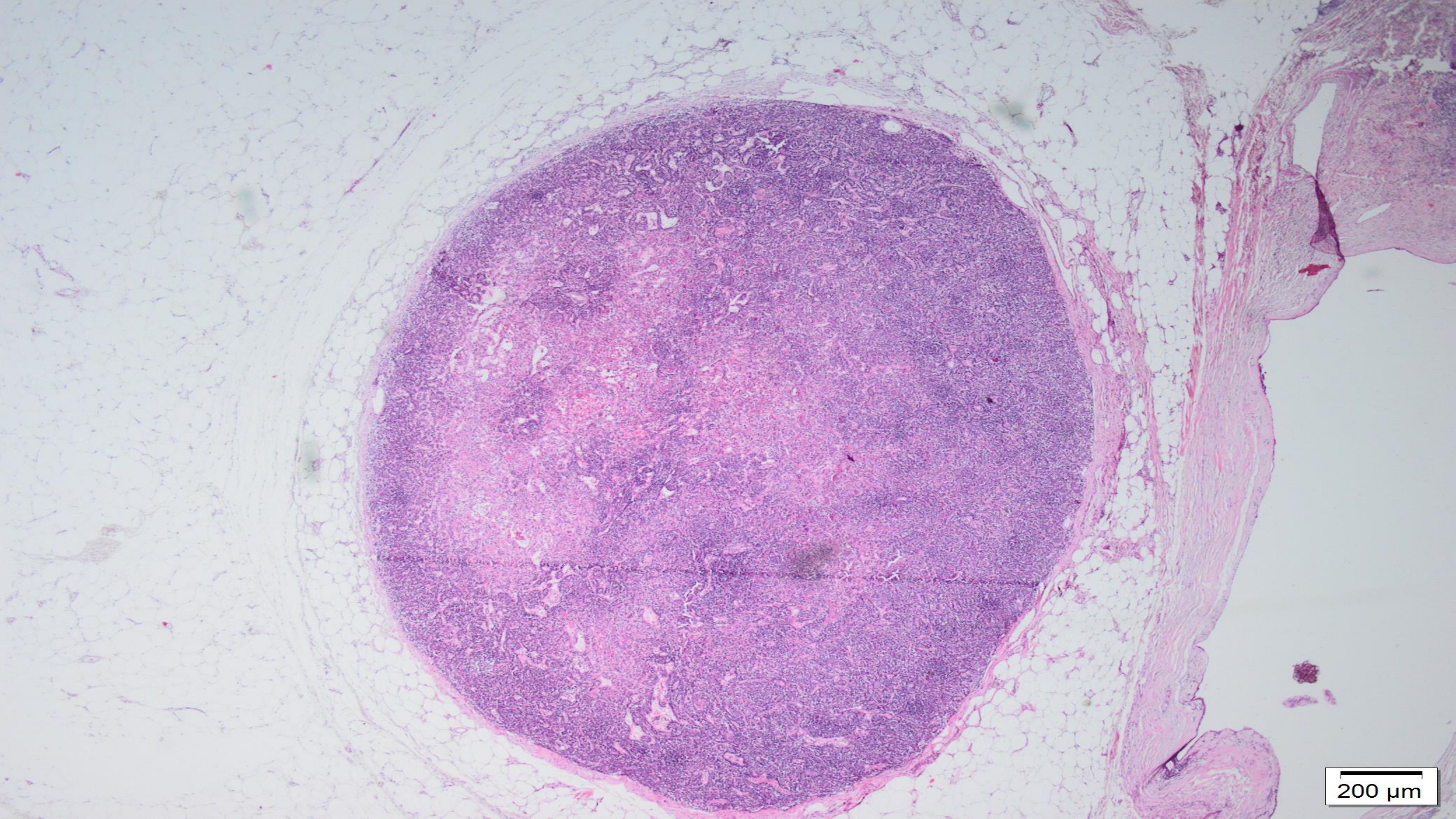
- **Clinical data:**

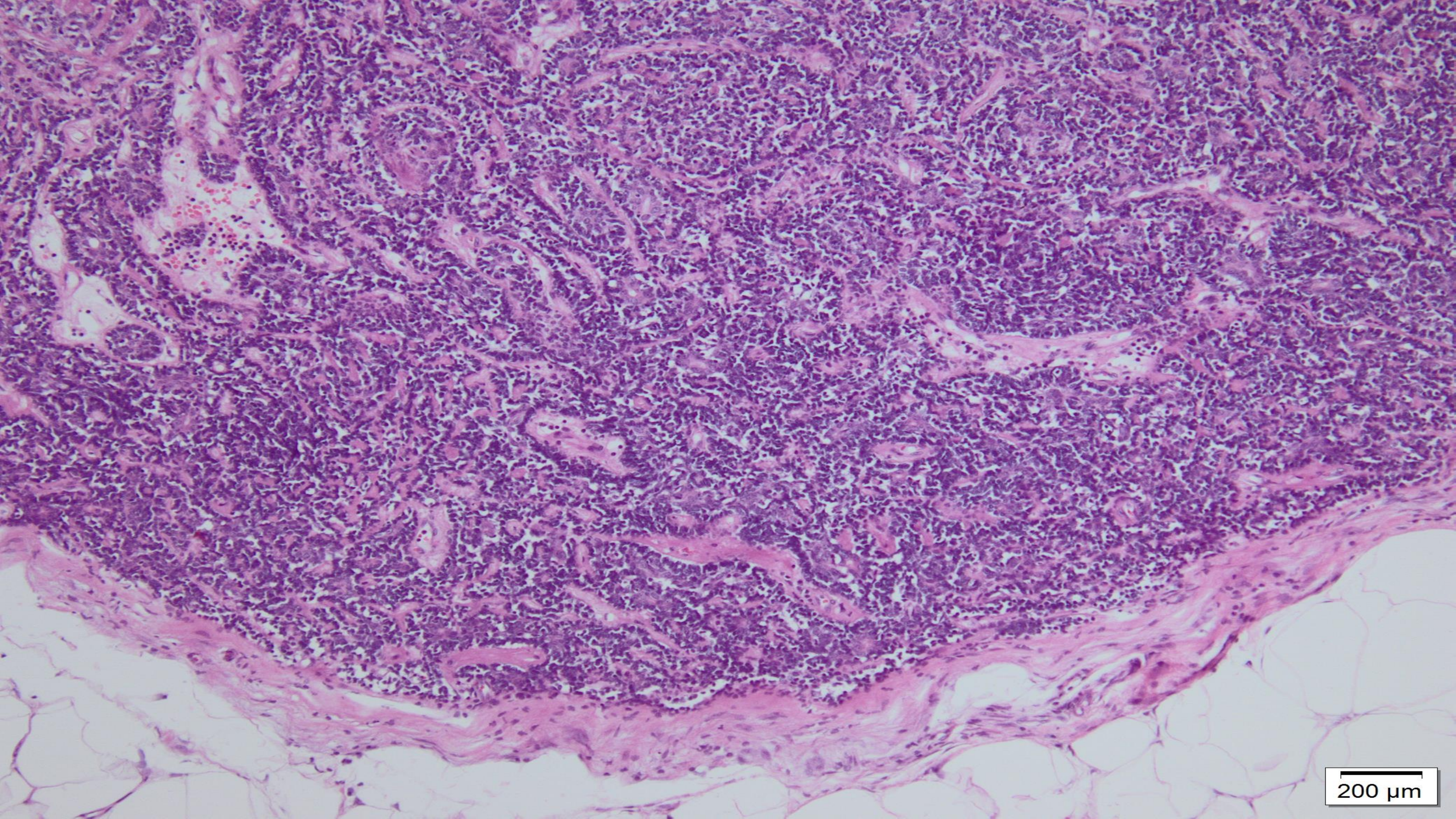
Female 69 yr. presented with thigh mass

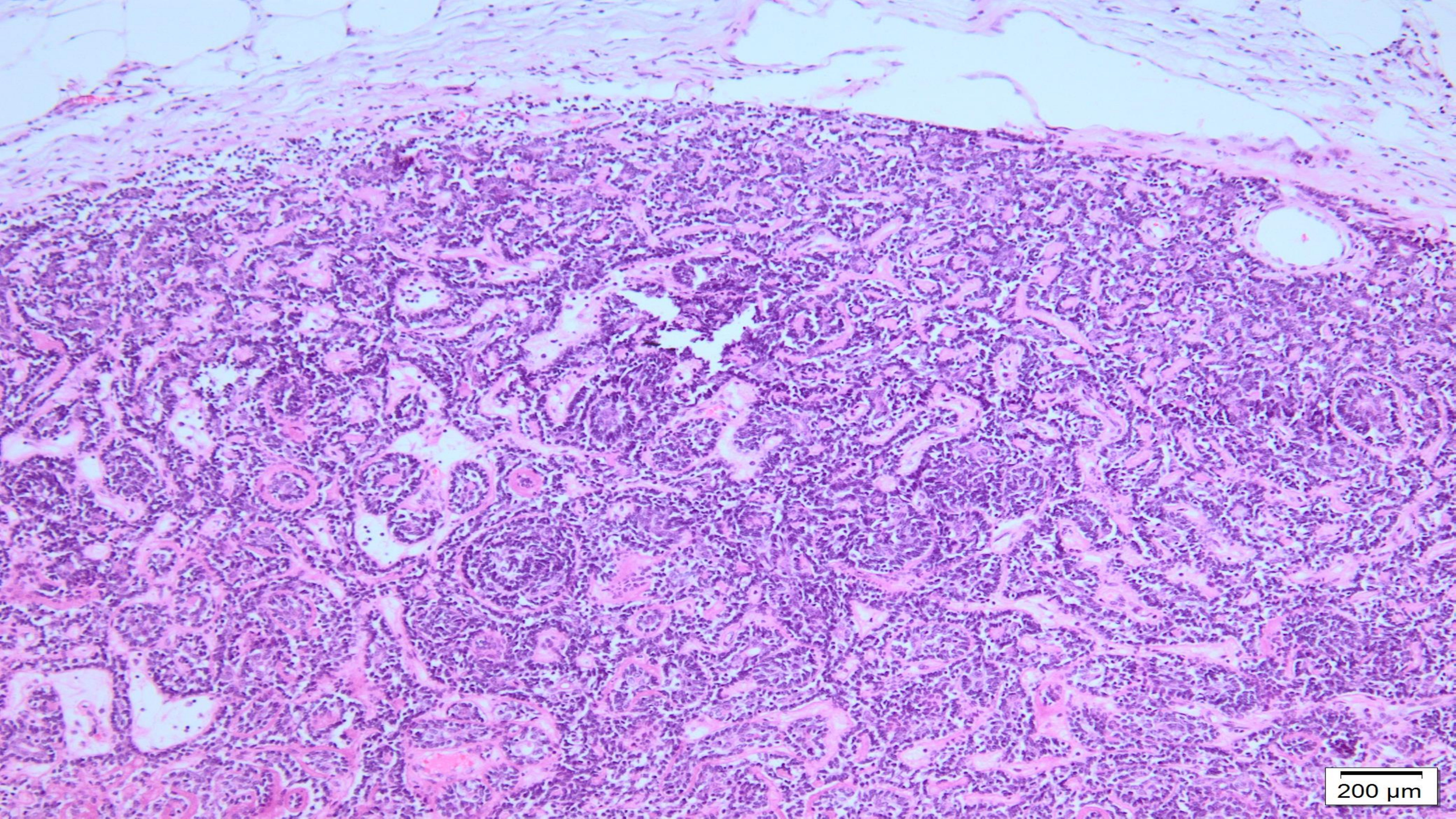
- **Gross:**

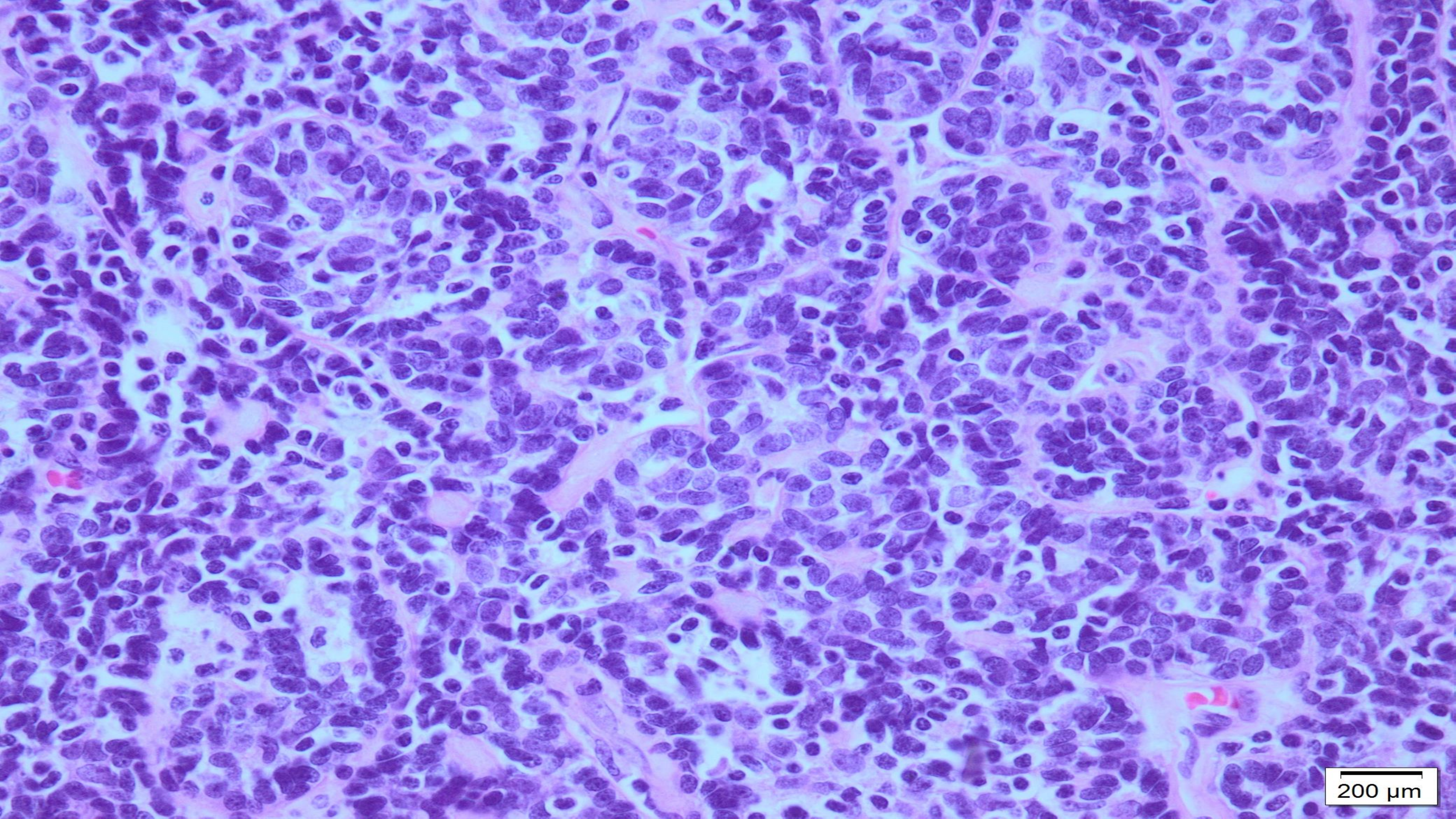
Skin tissue piece 4x4 cm with partially cystic nodule 2x1.8 cm, 1.4 cm in thickness.

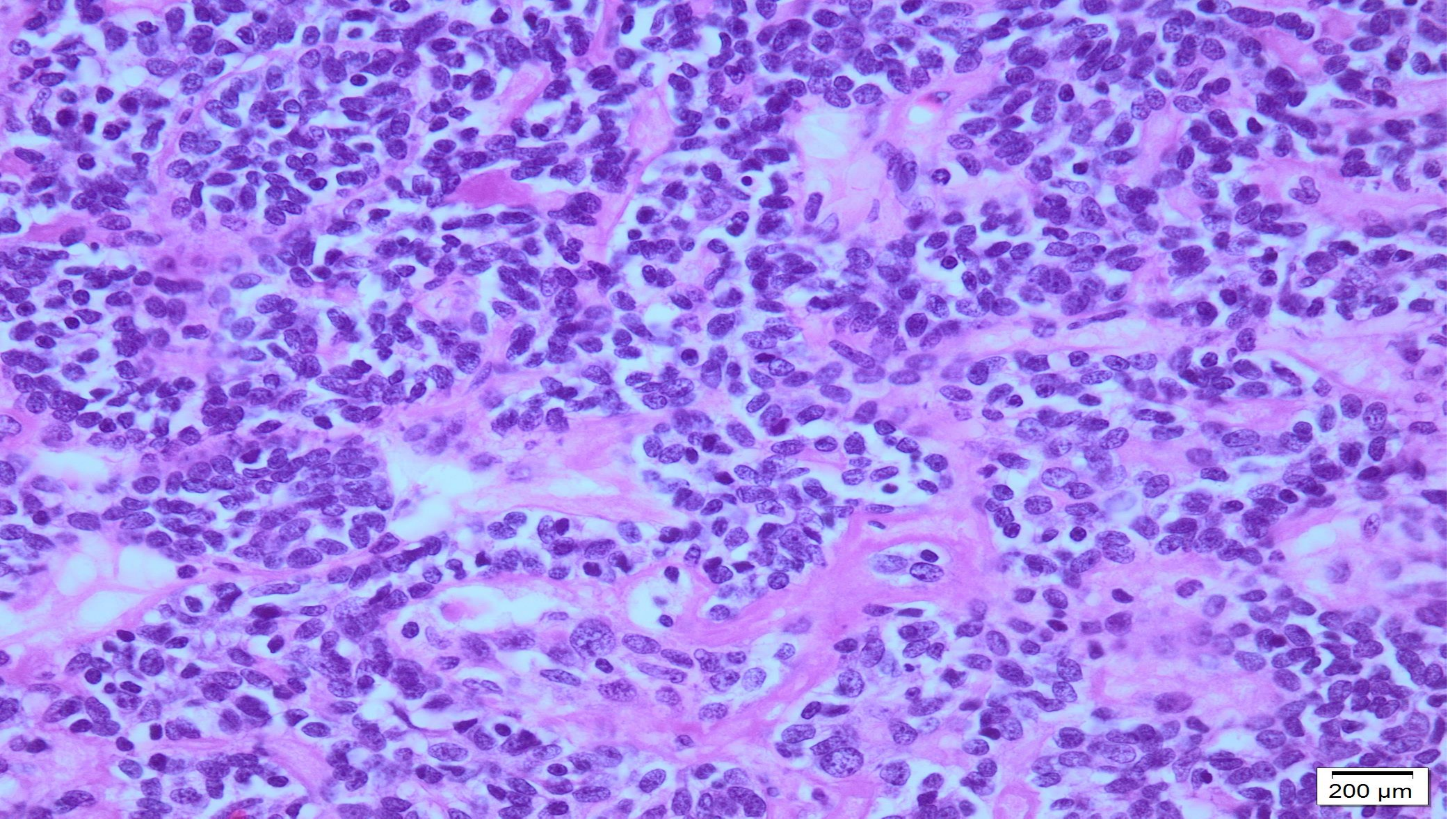
Microscopic examination

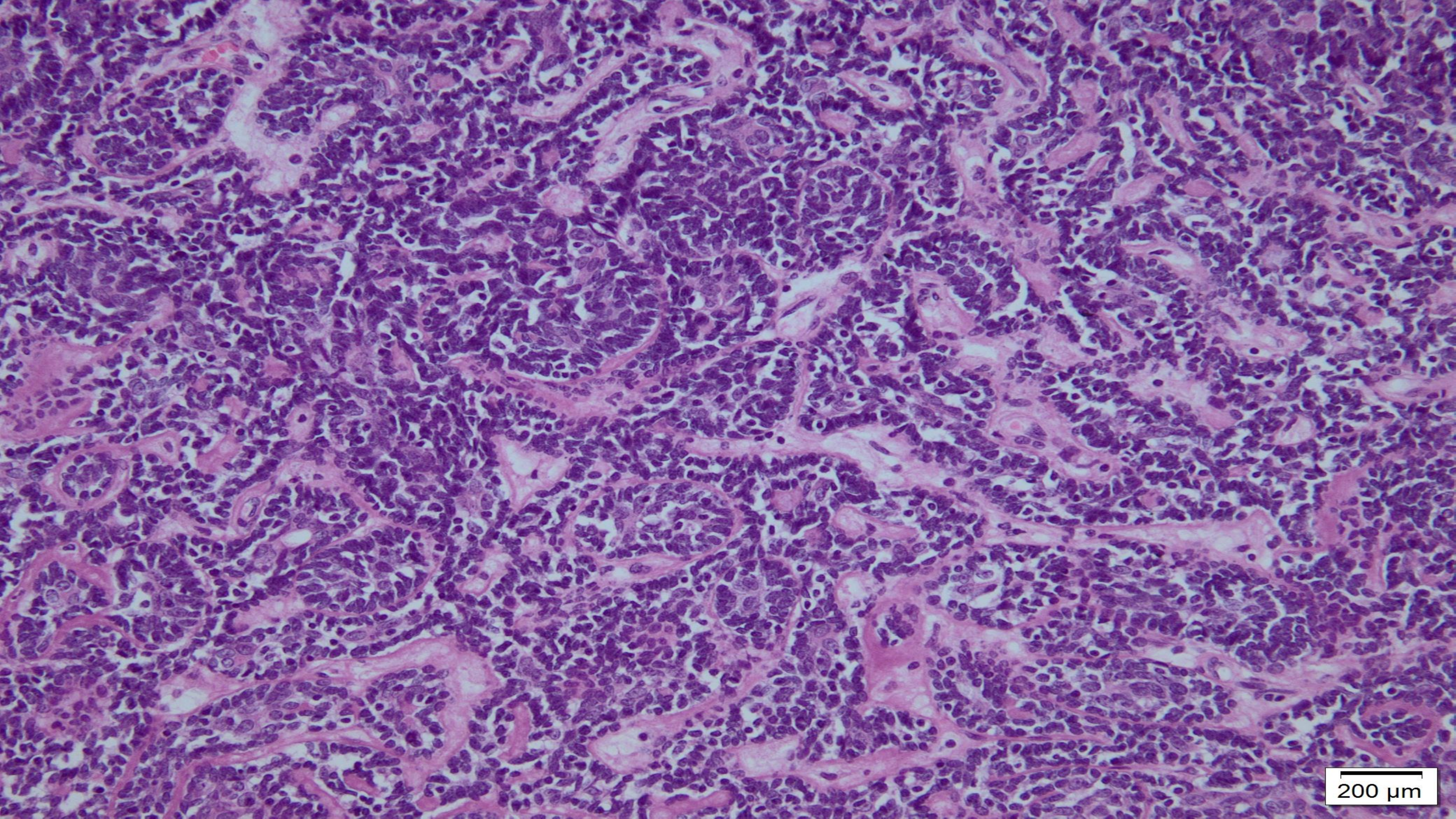

200 µm

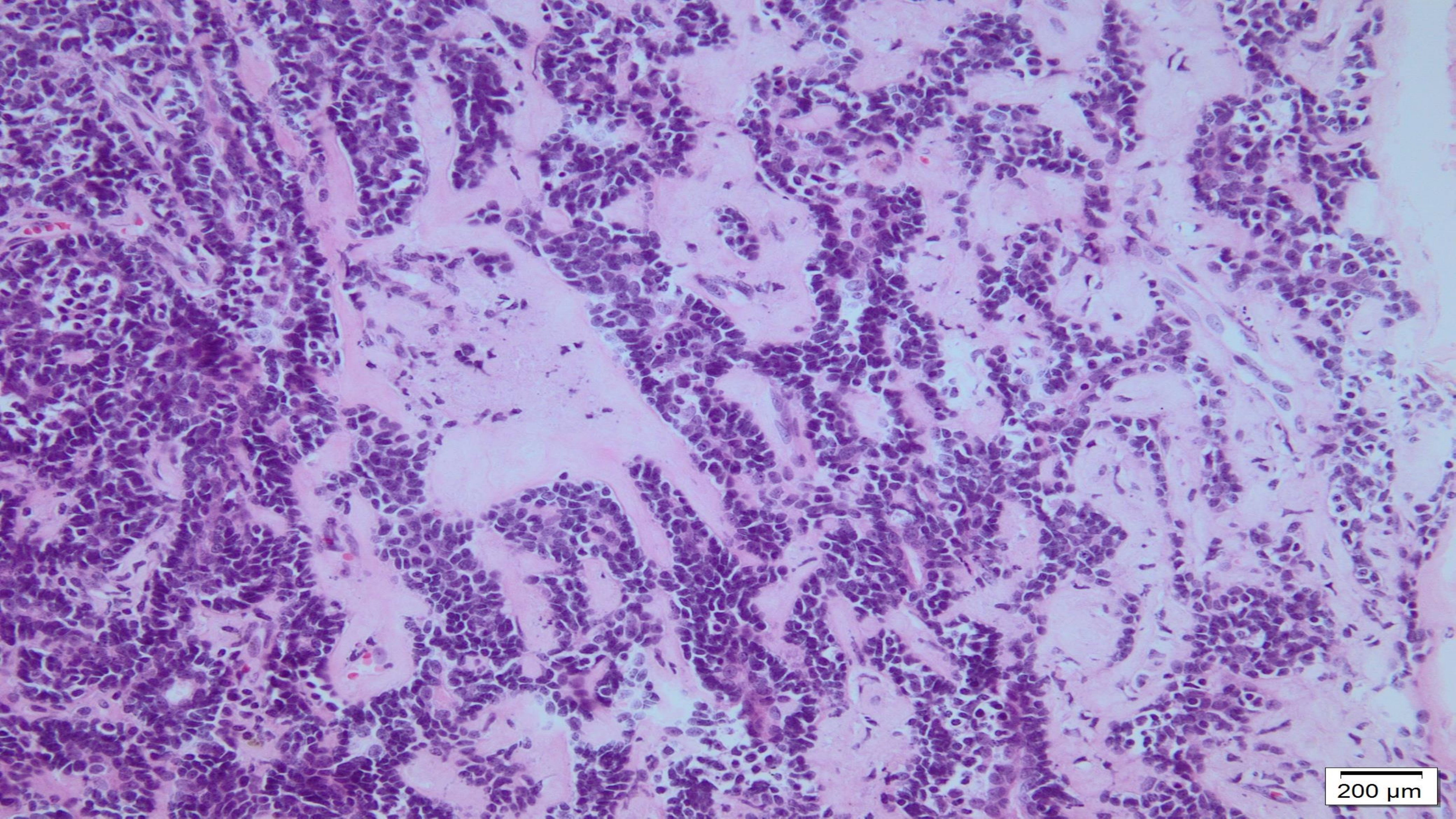

200 μm

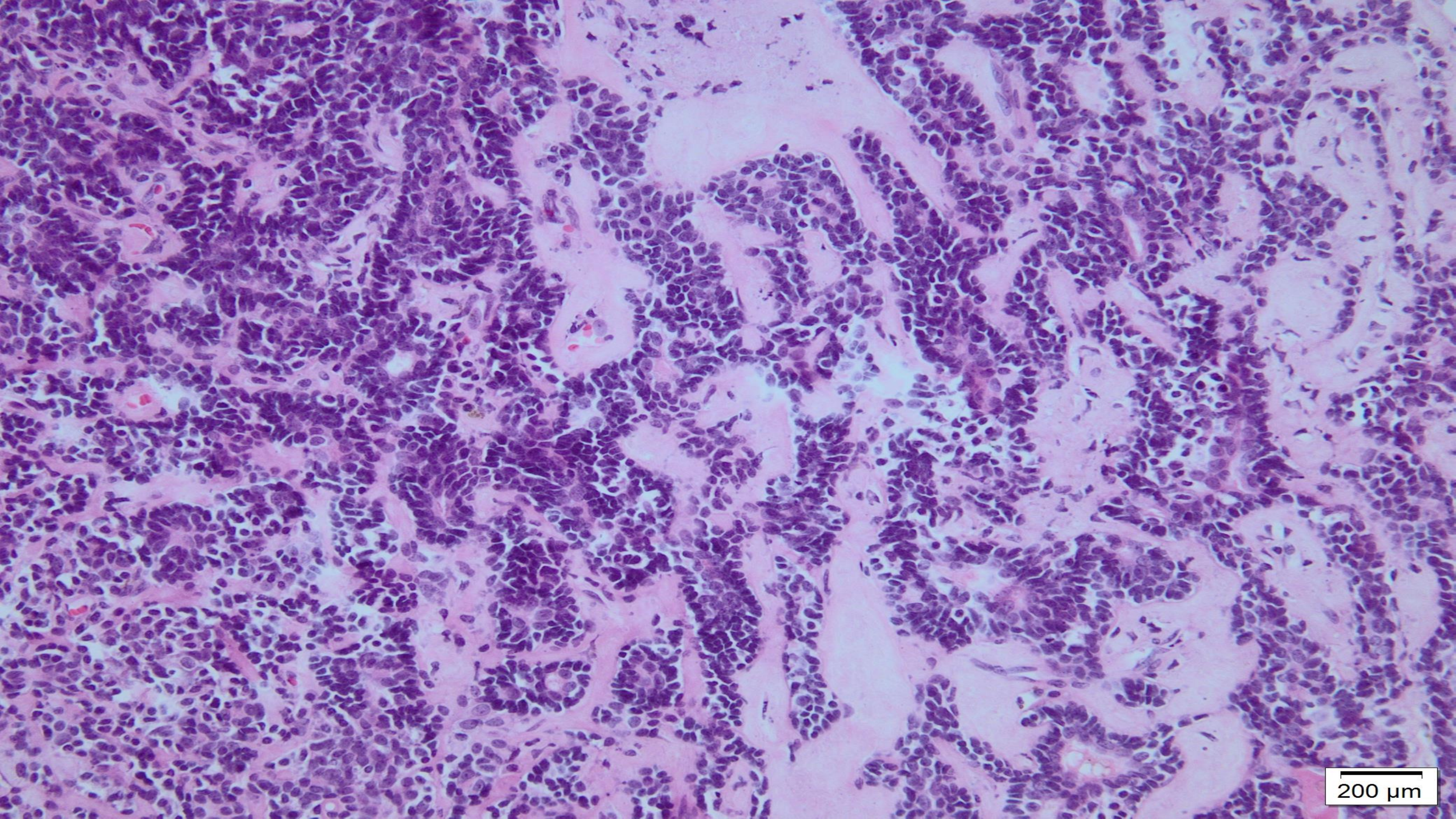

200 µm

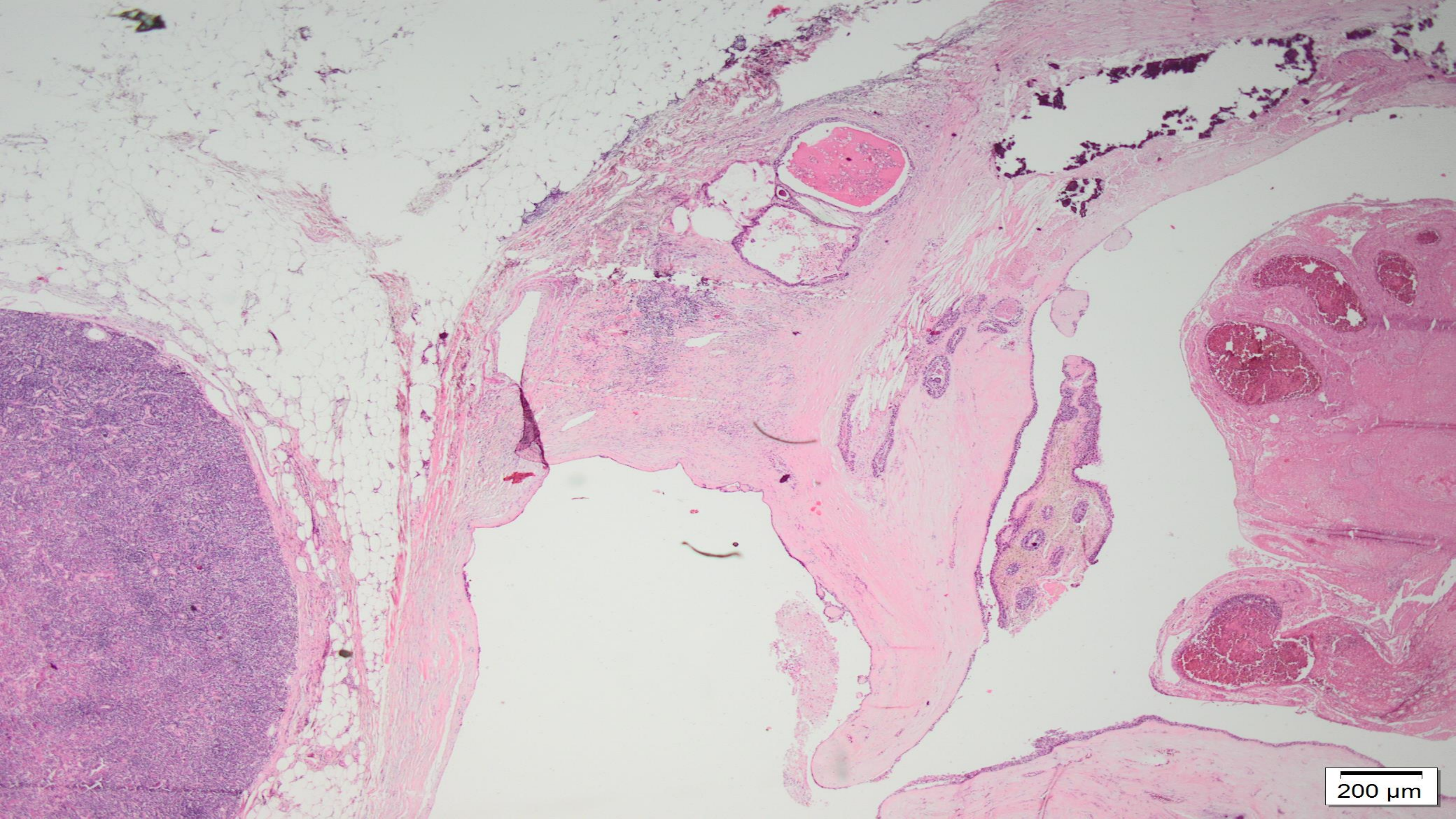

200 µm

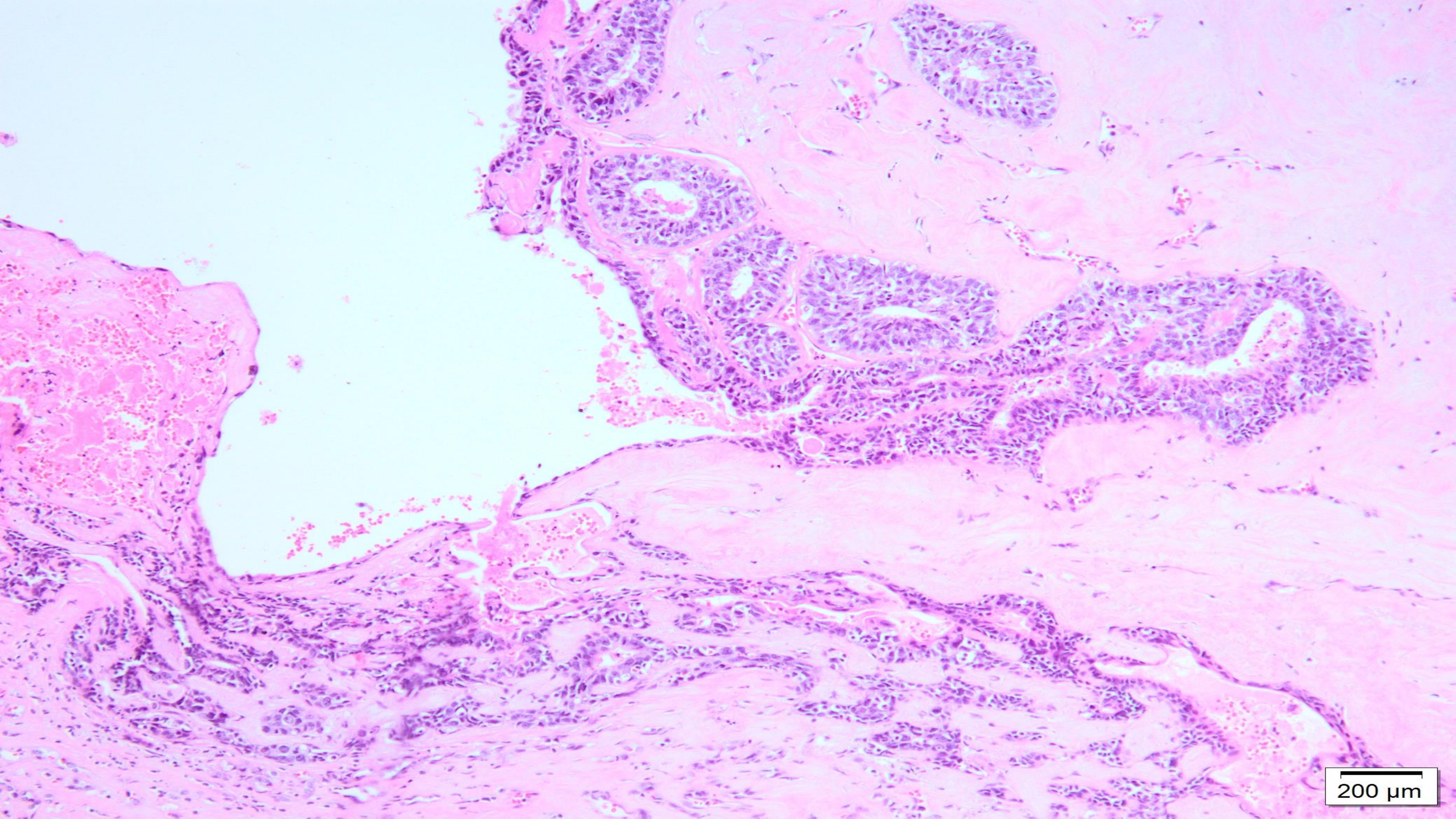

200 µm

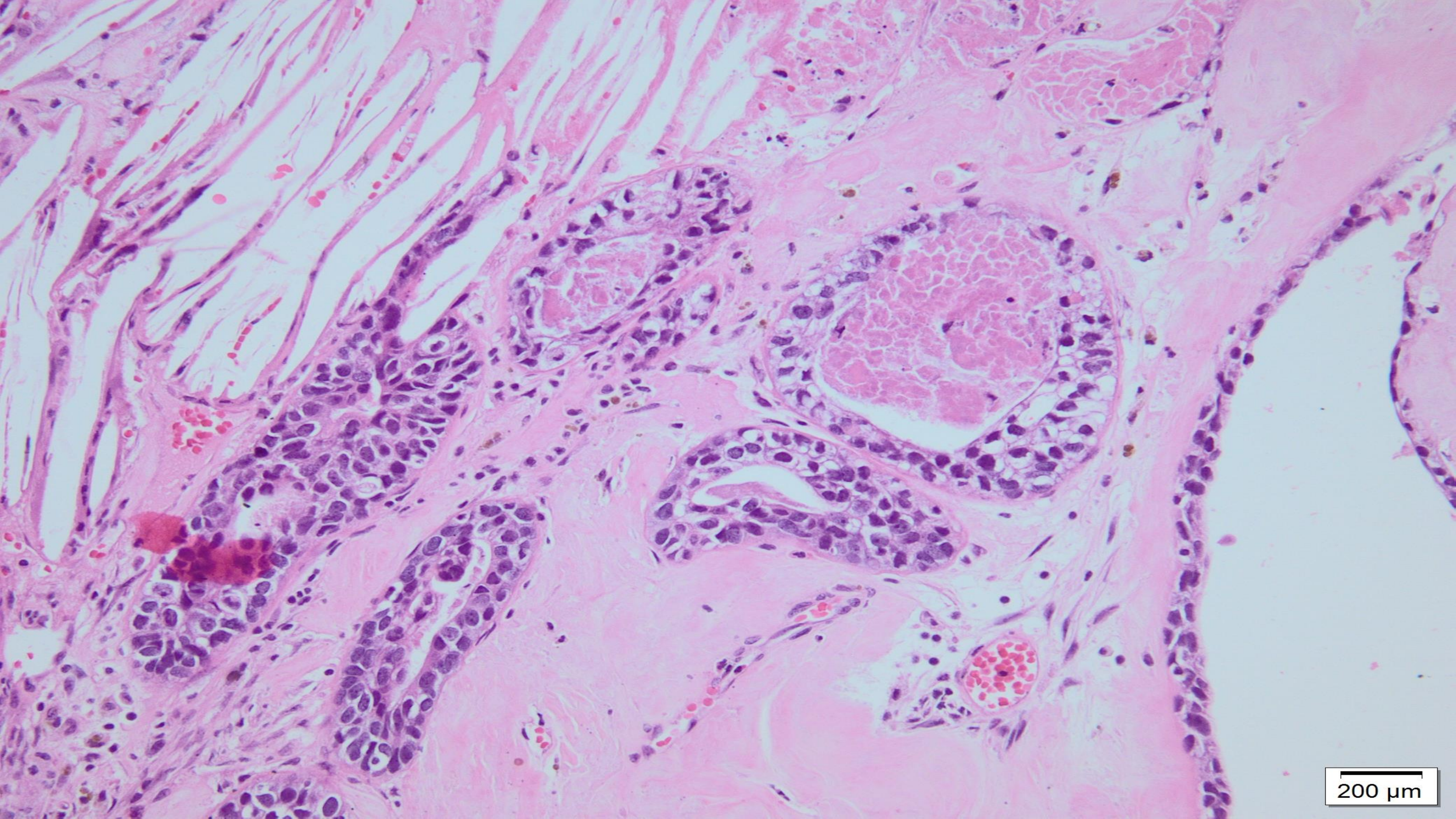

200 µm

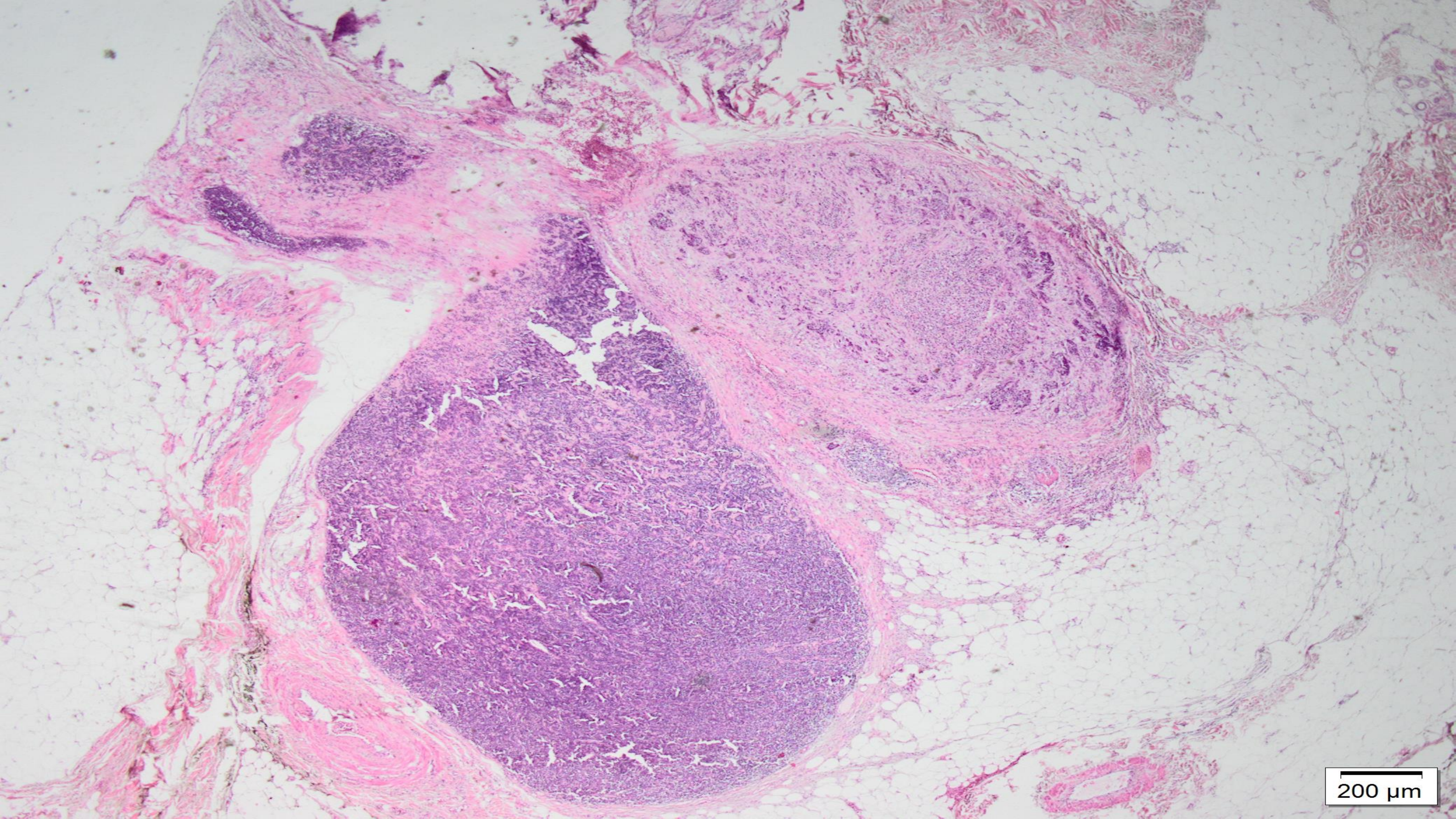

200 μm

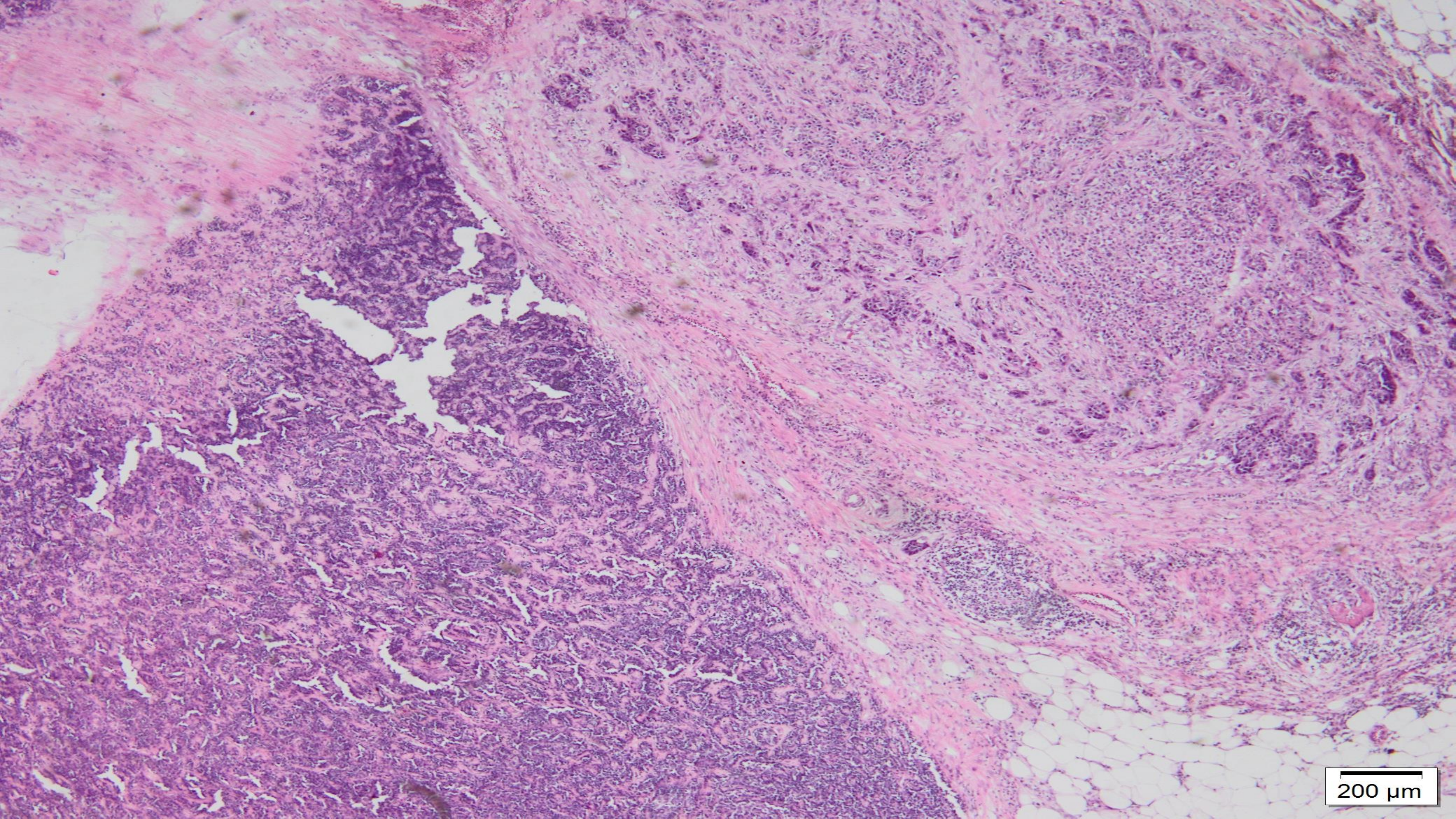

200 μm

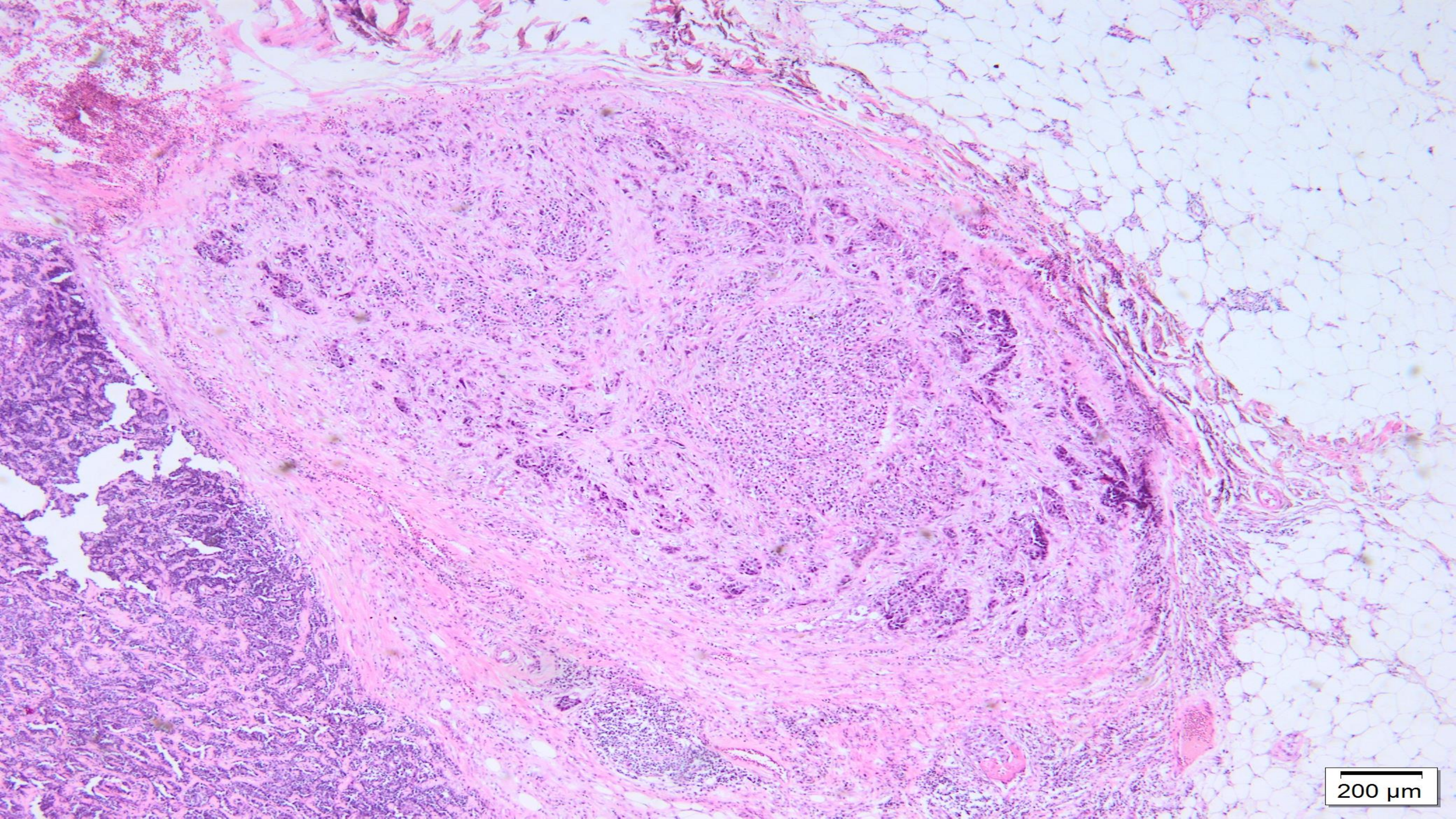

200 µm

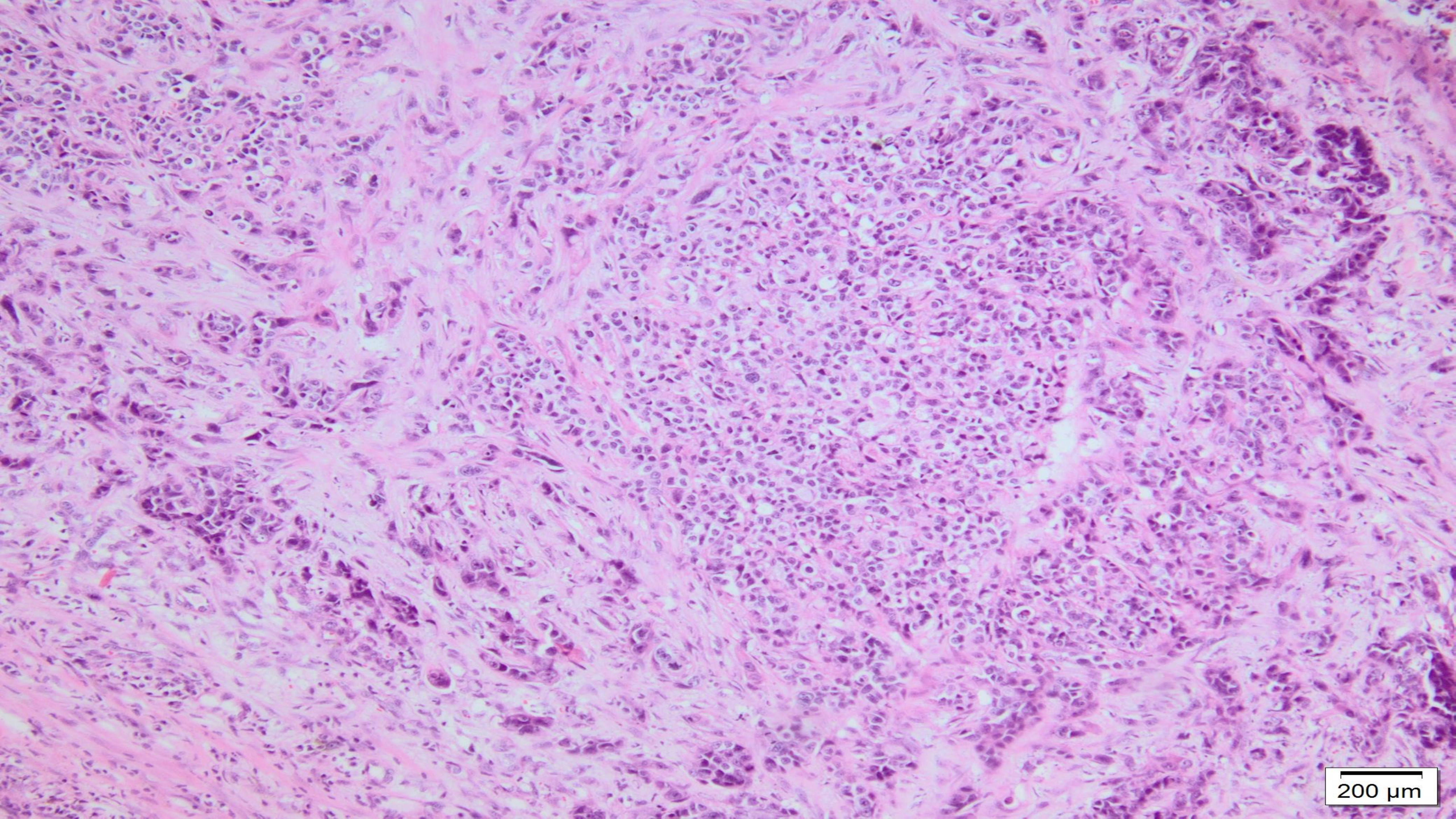

200 μm

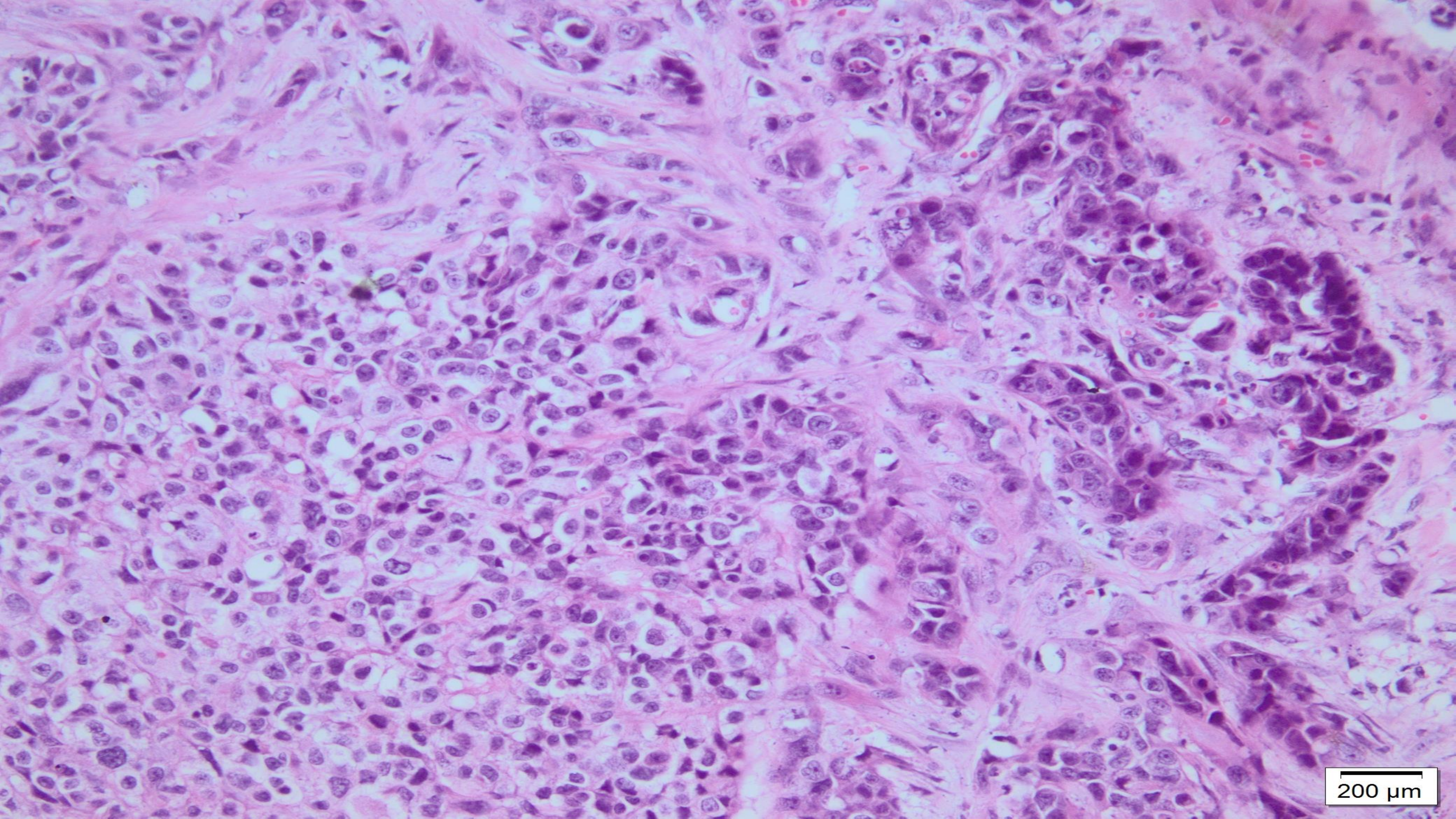

200 µm

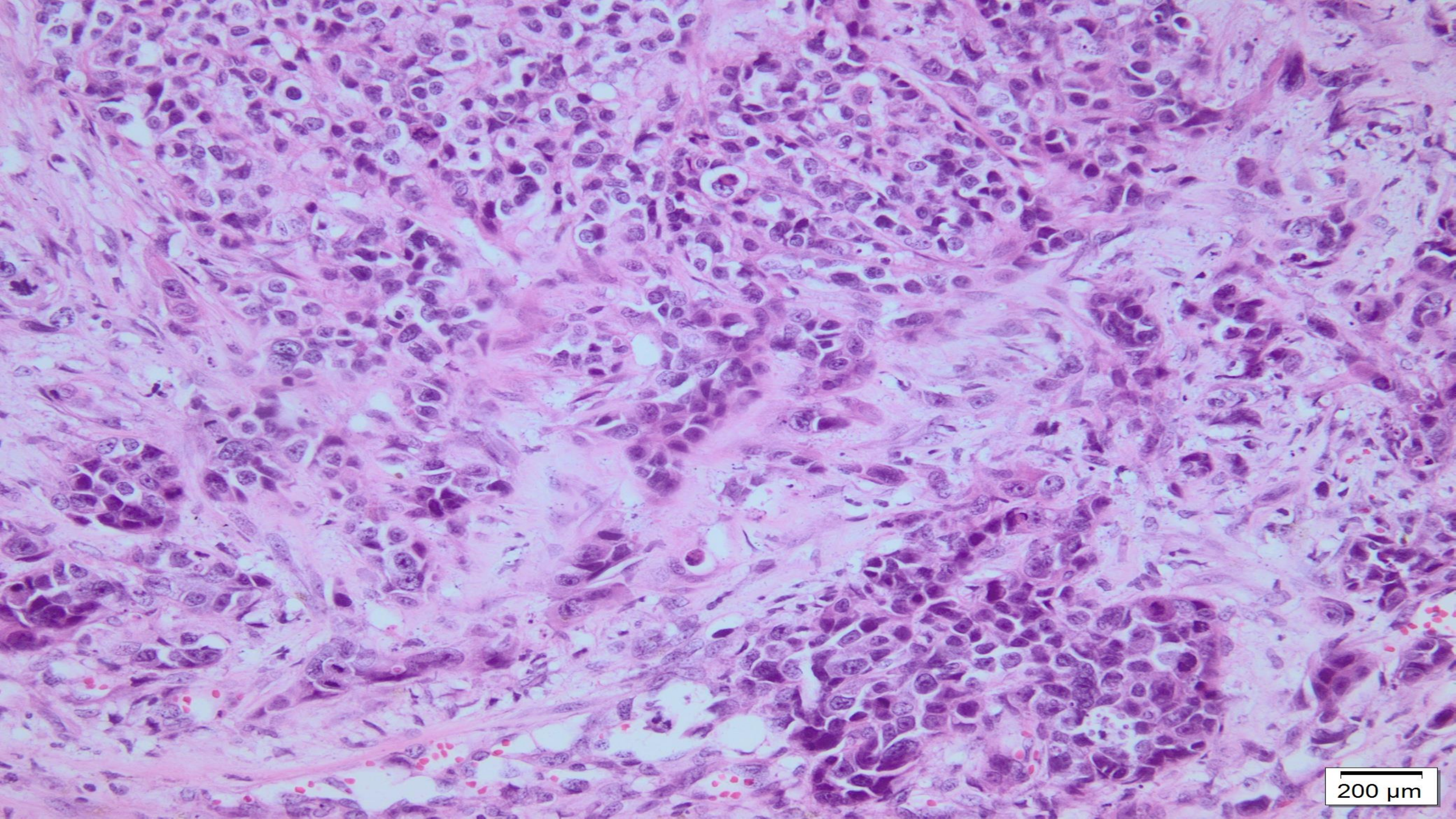

200 µm

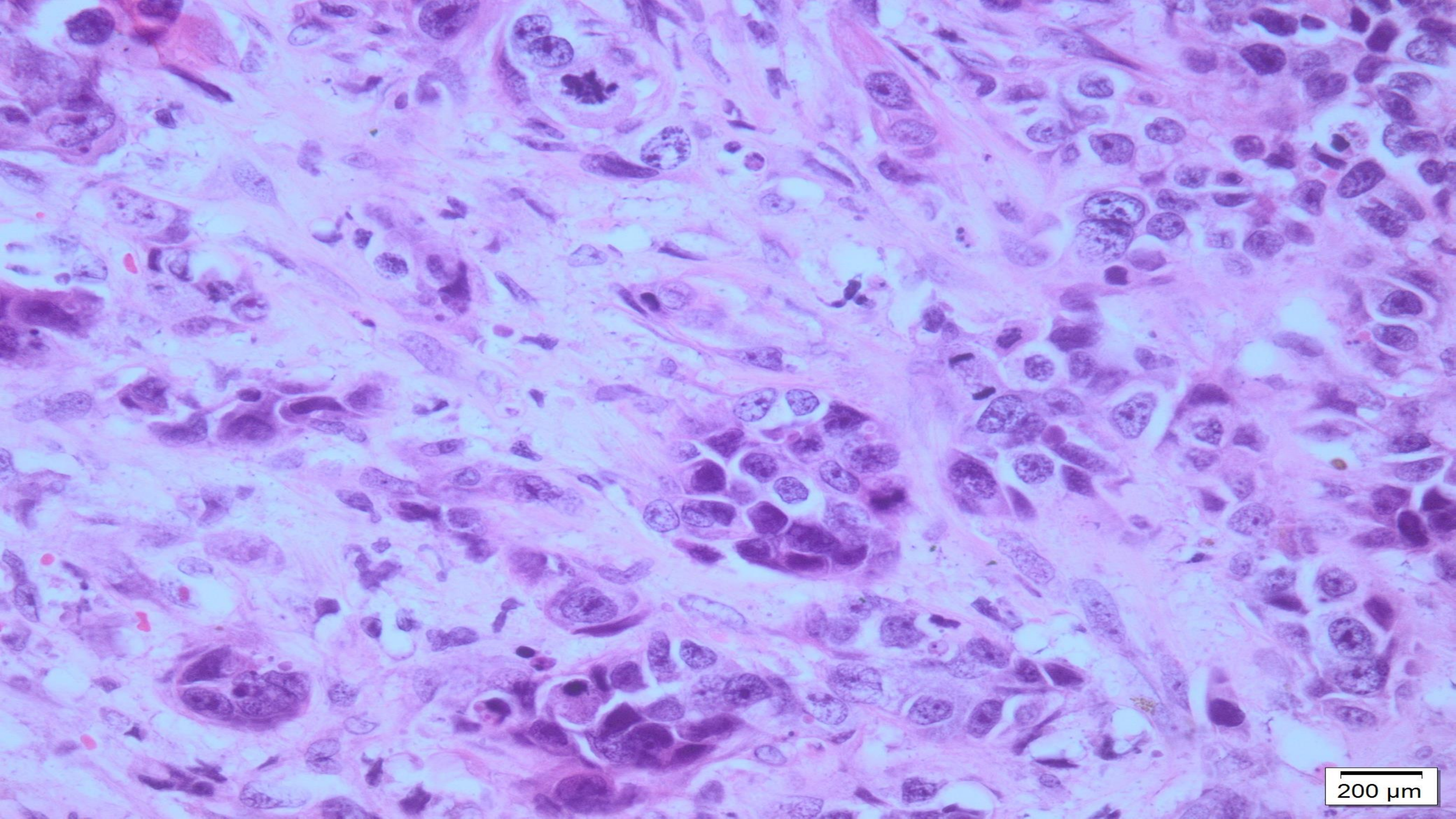

200 µm

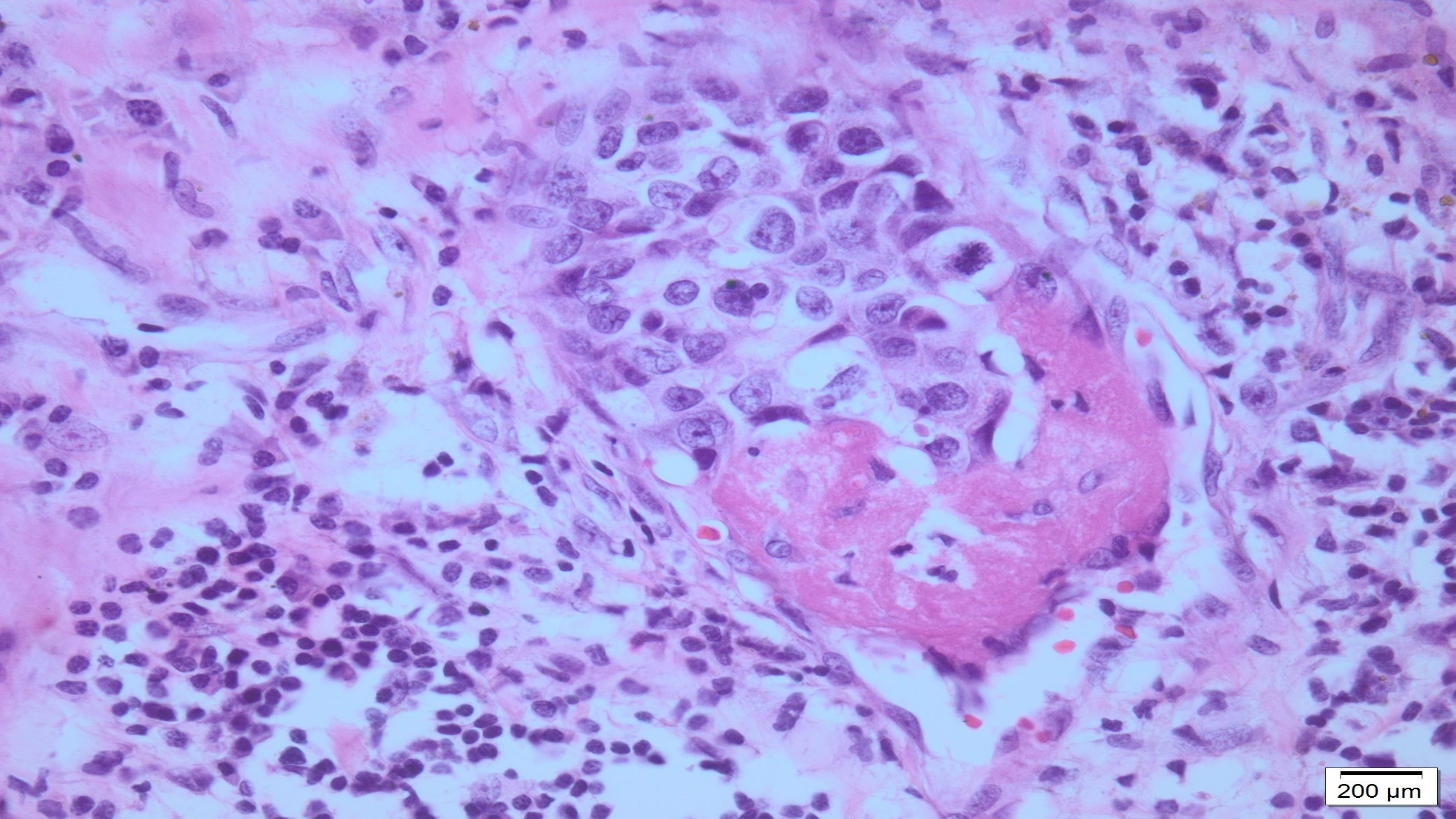

200 μm

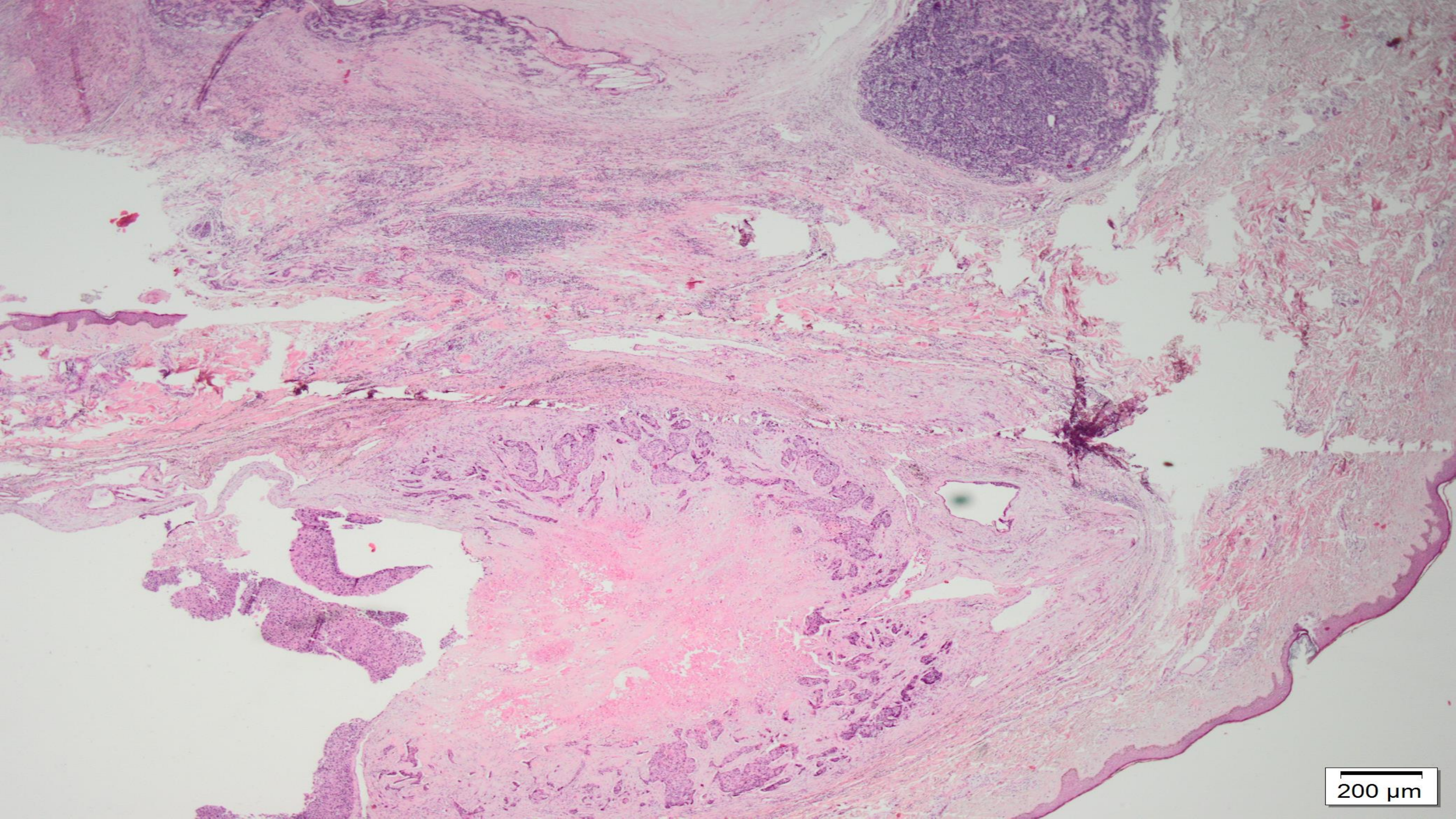

200 µm

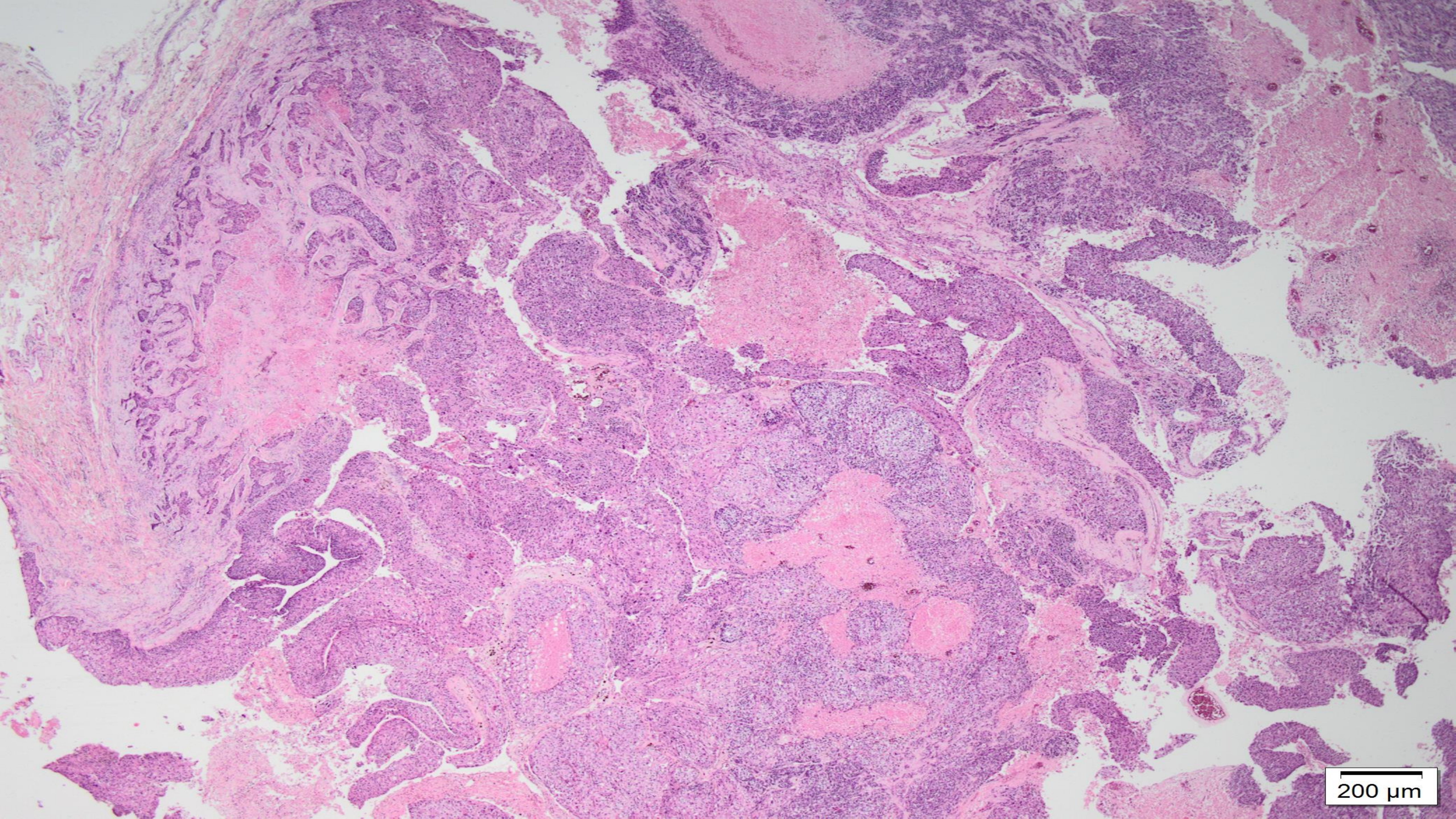

200 μm

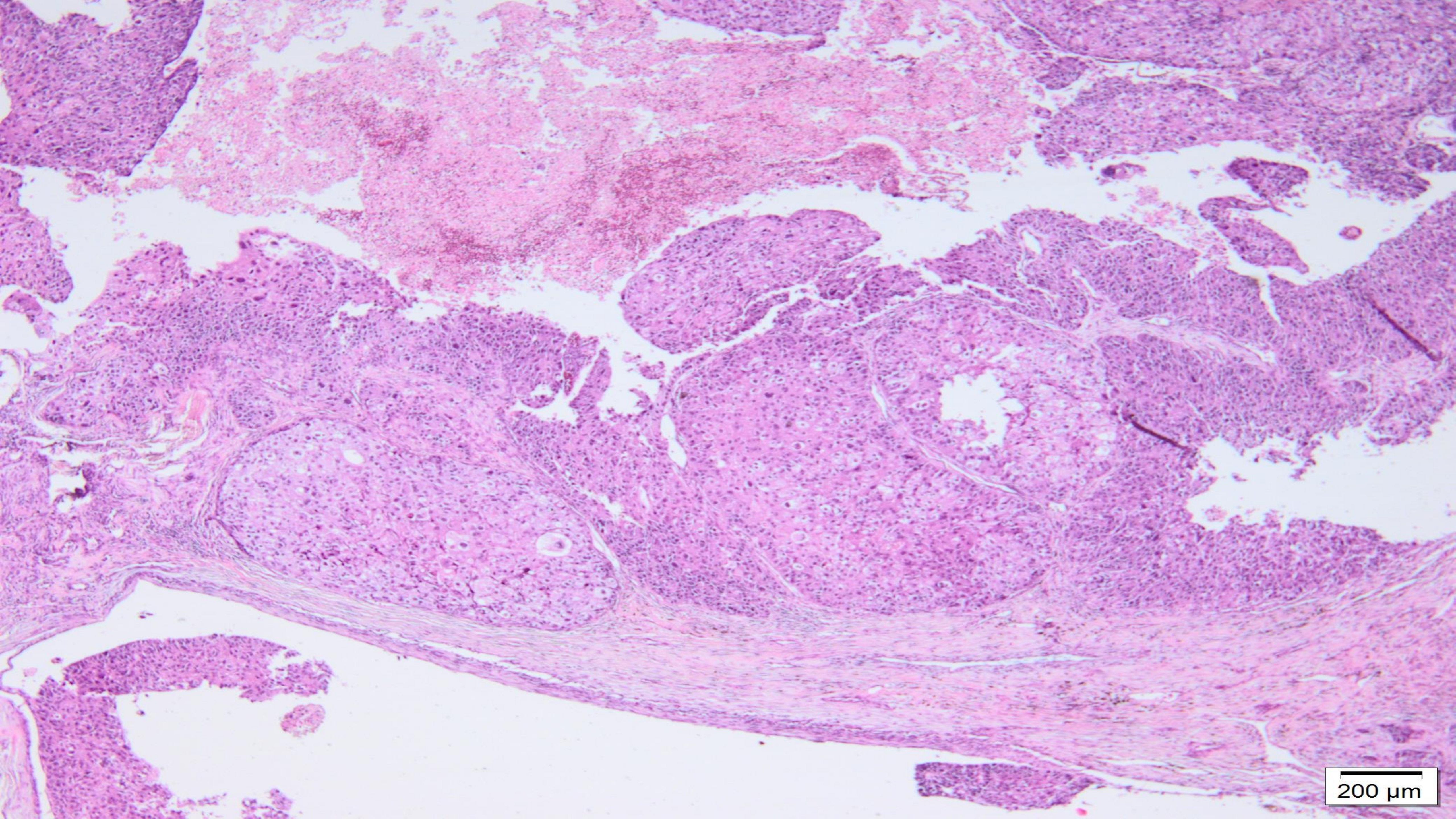

200 μm

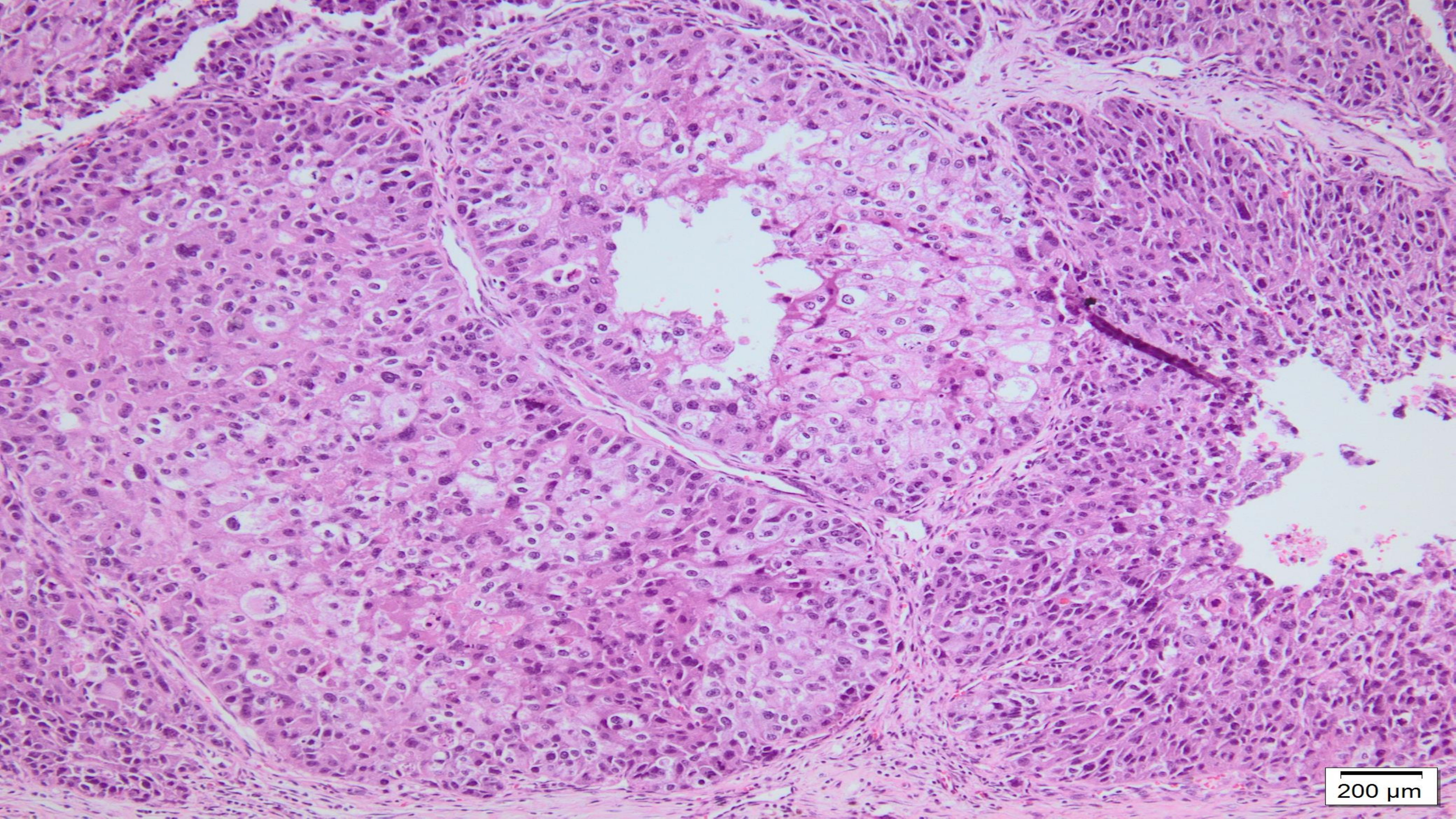

200 µm

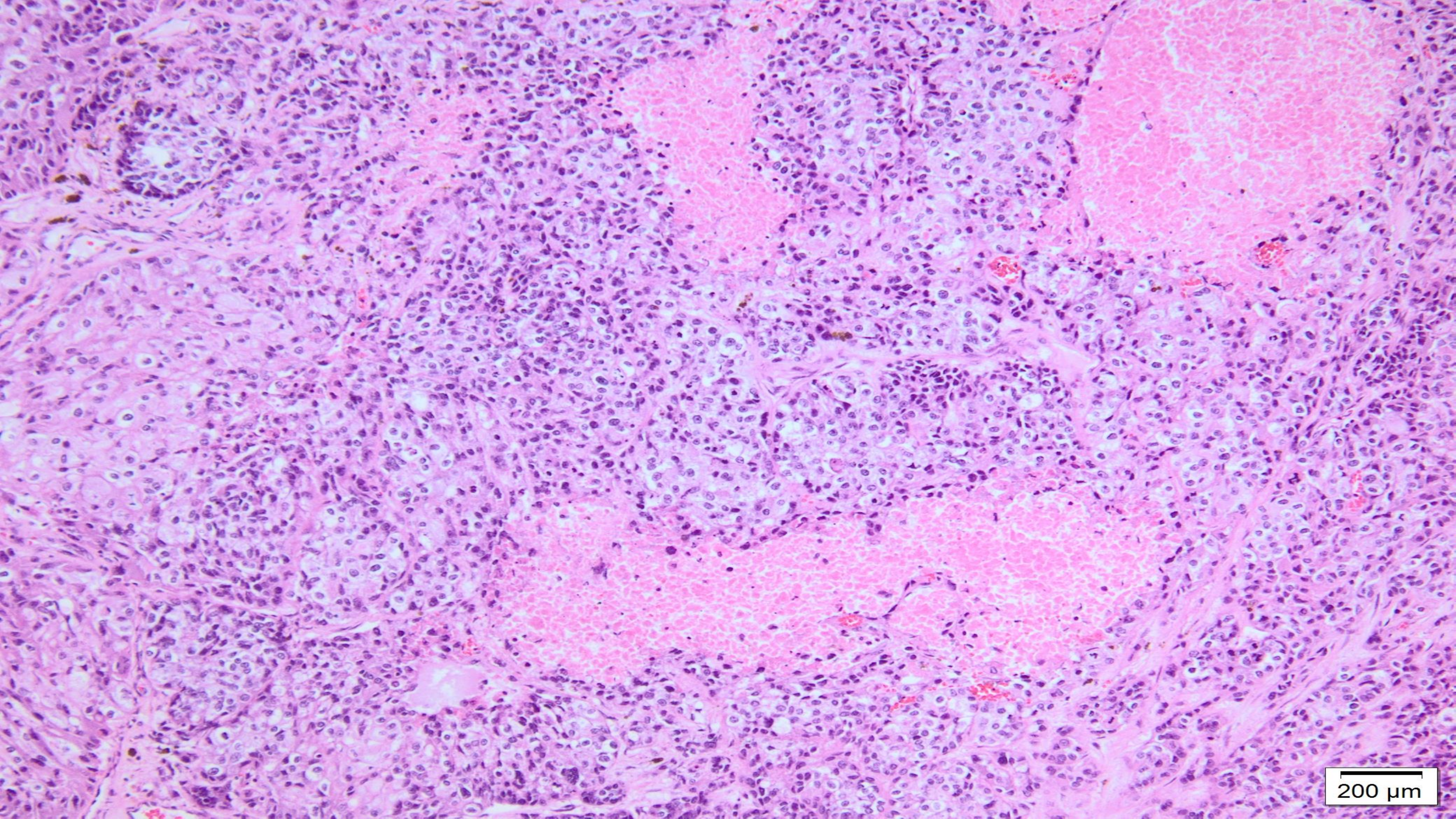

200 μm

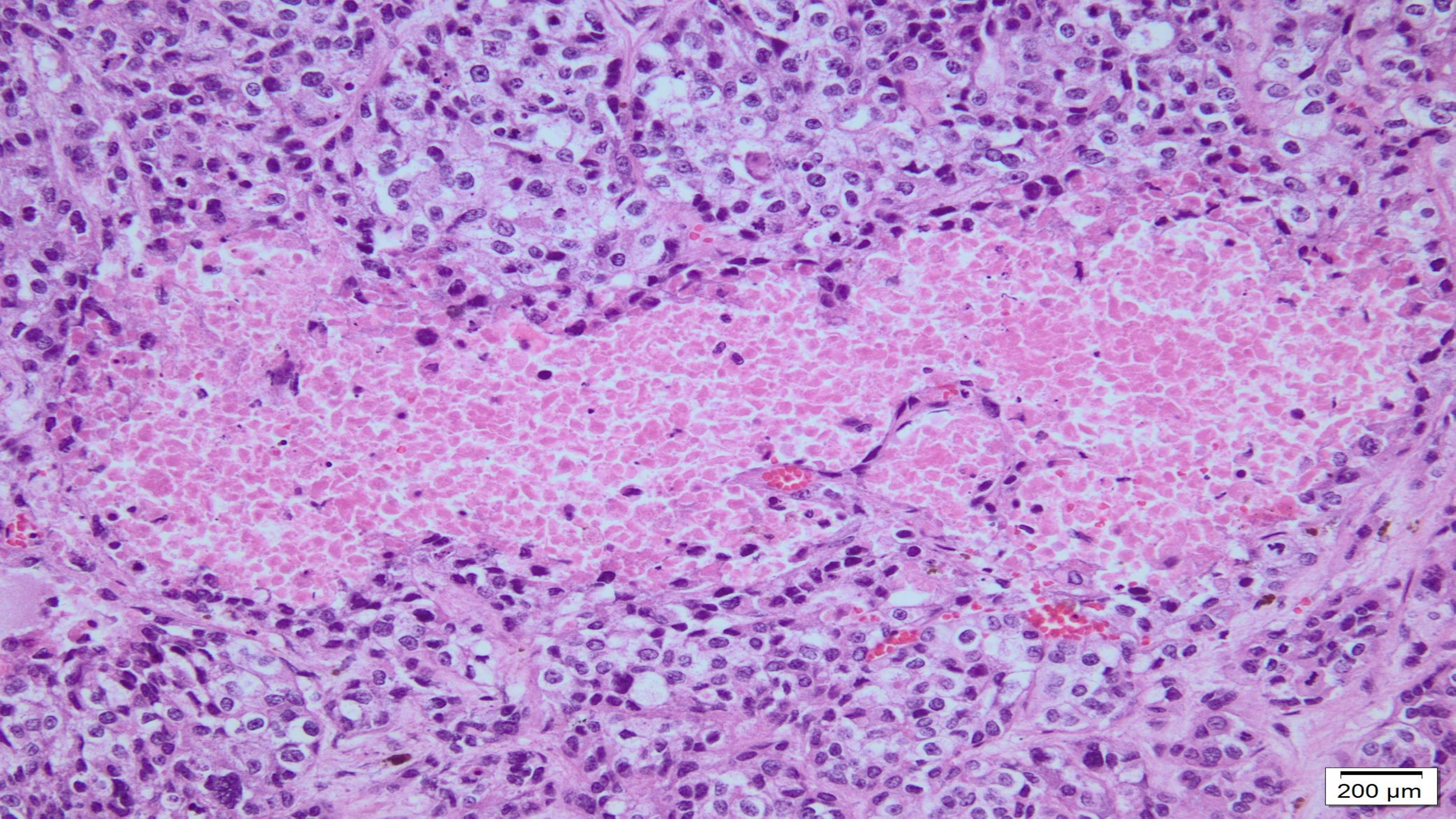

200 µm

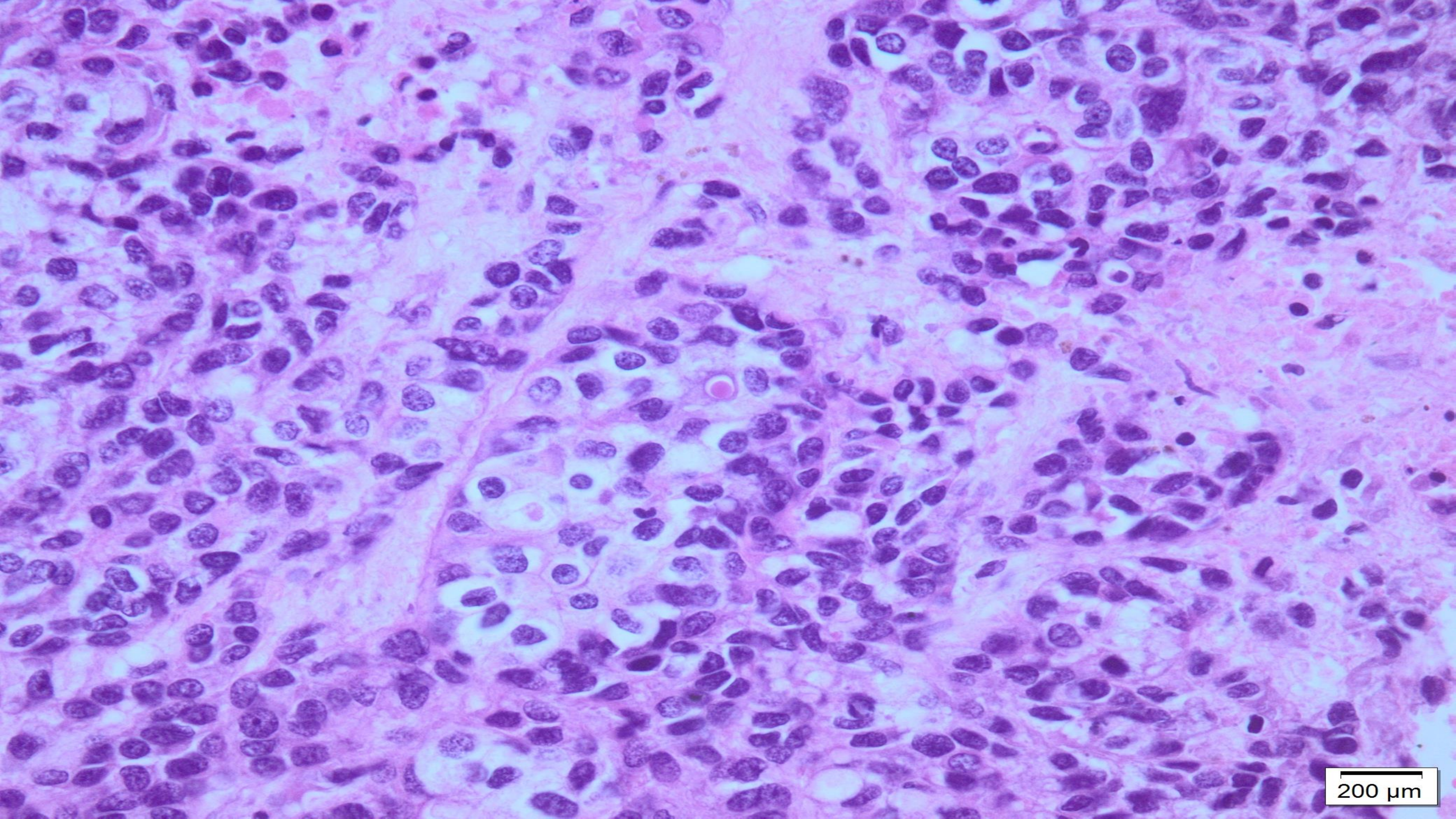

200 µm

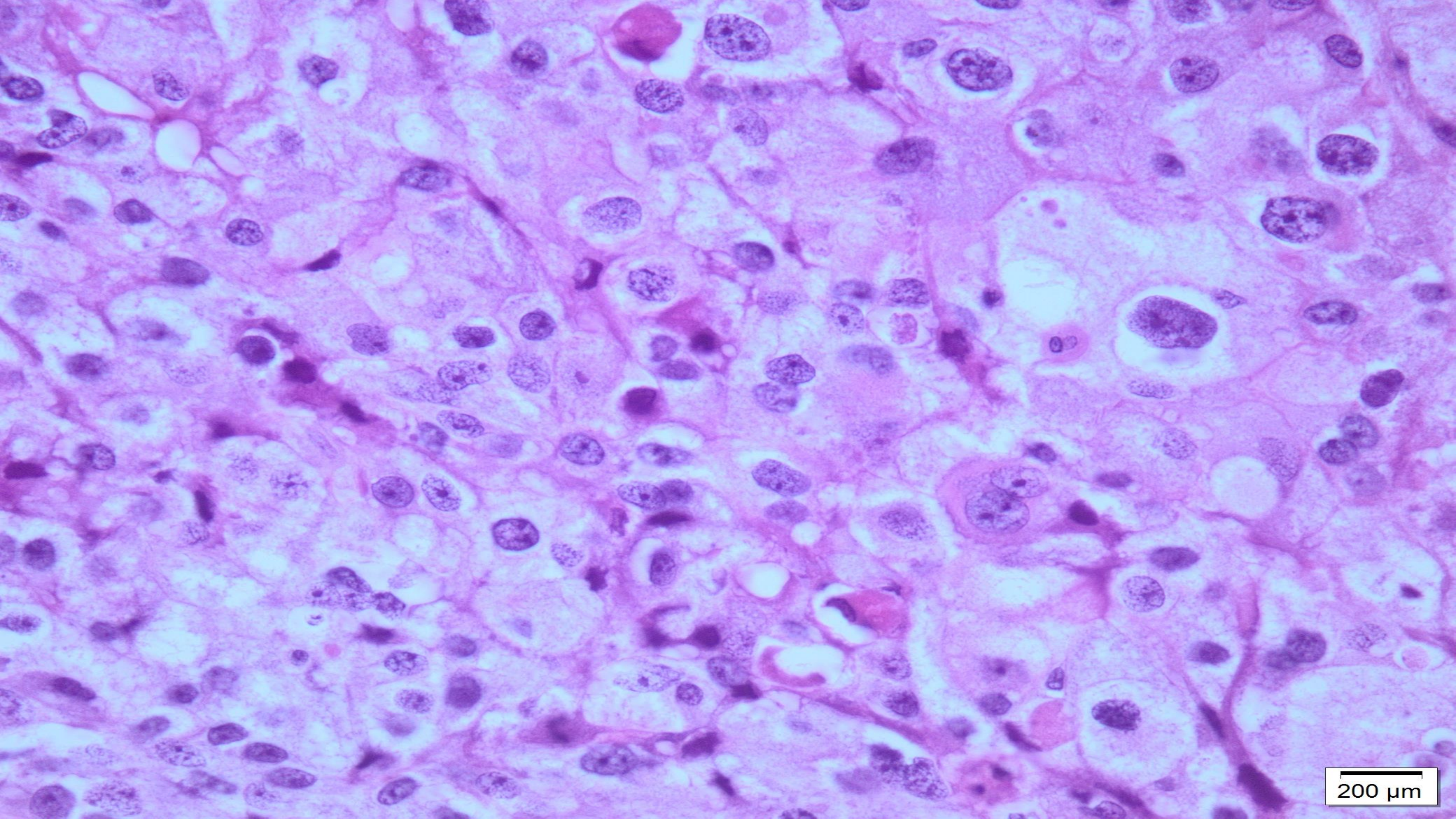

200 µm

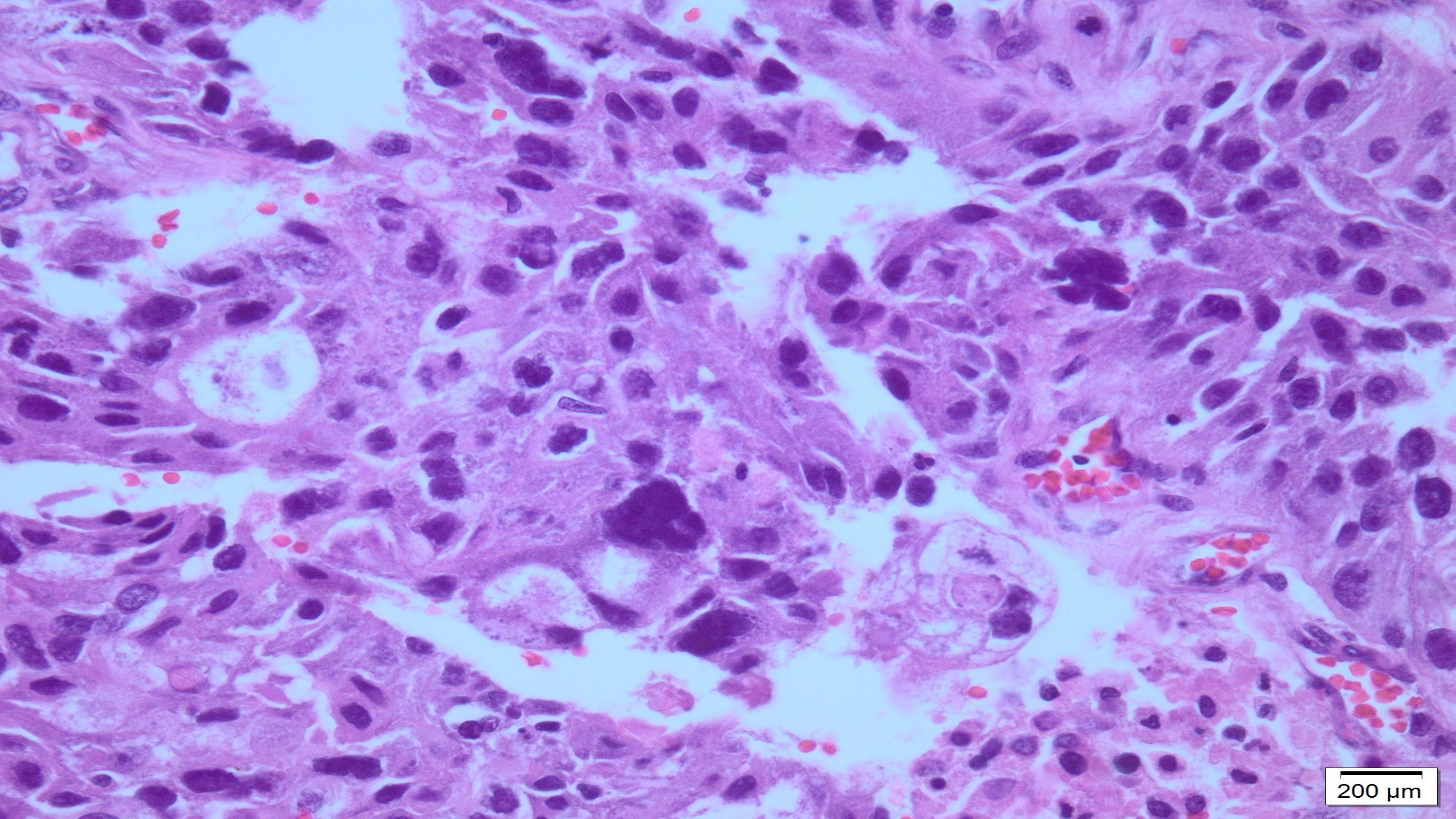

200 μm

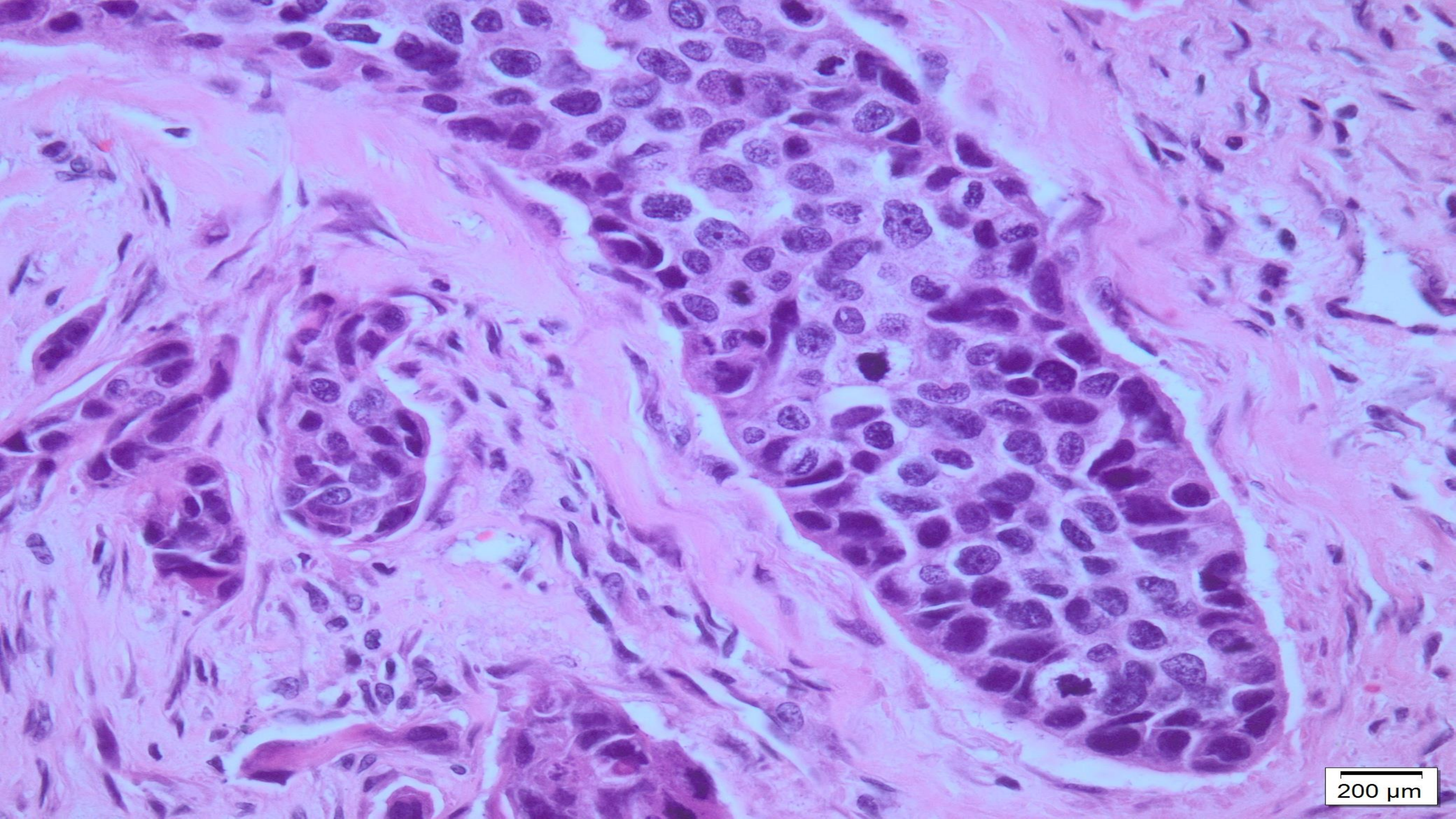

200 µm

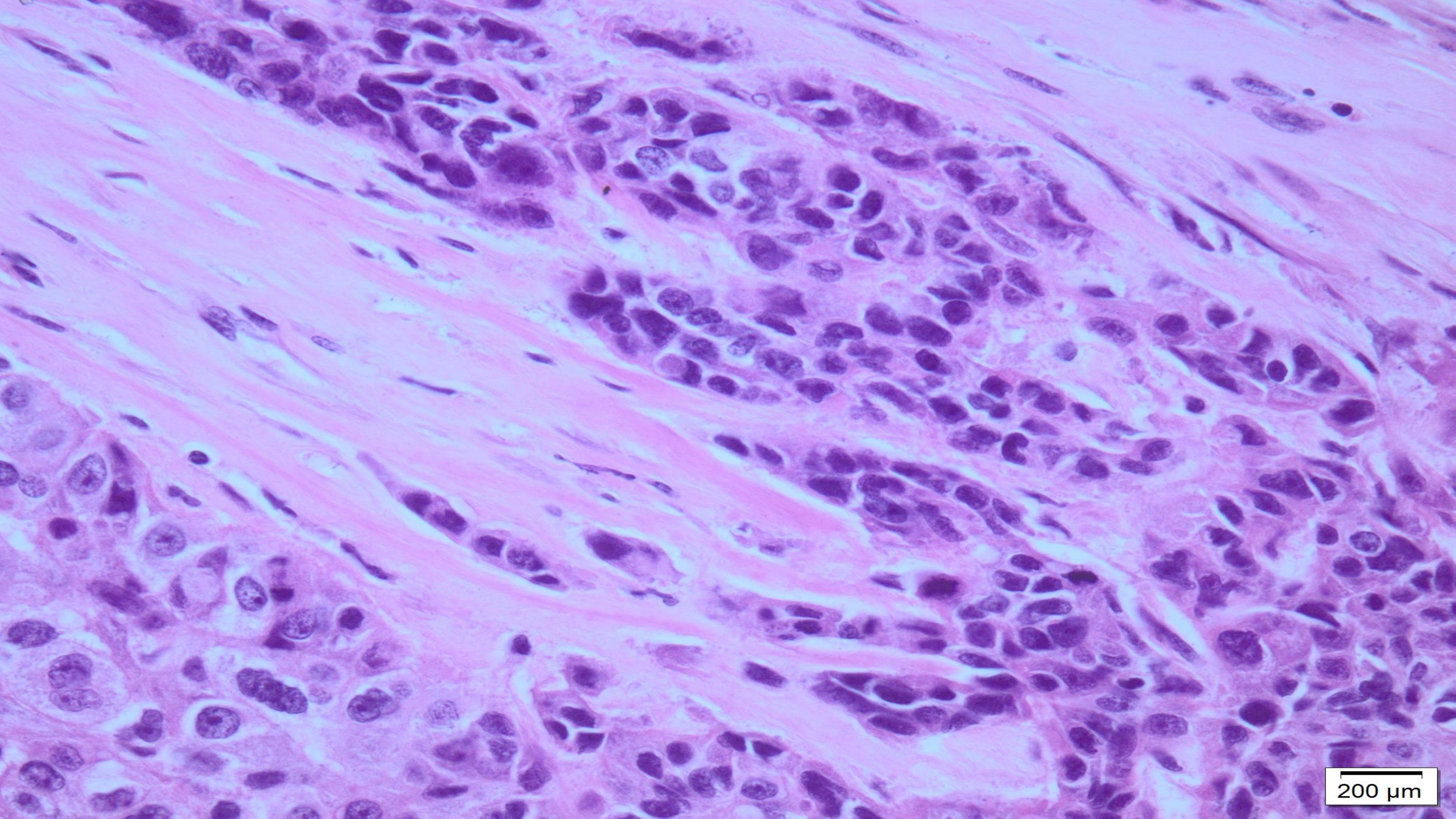

200 µm

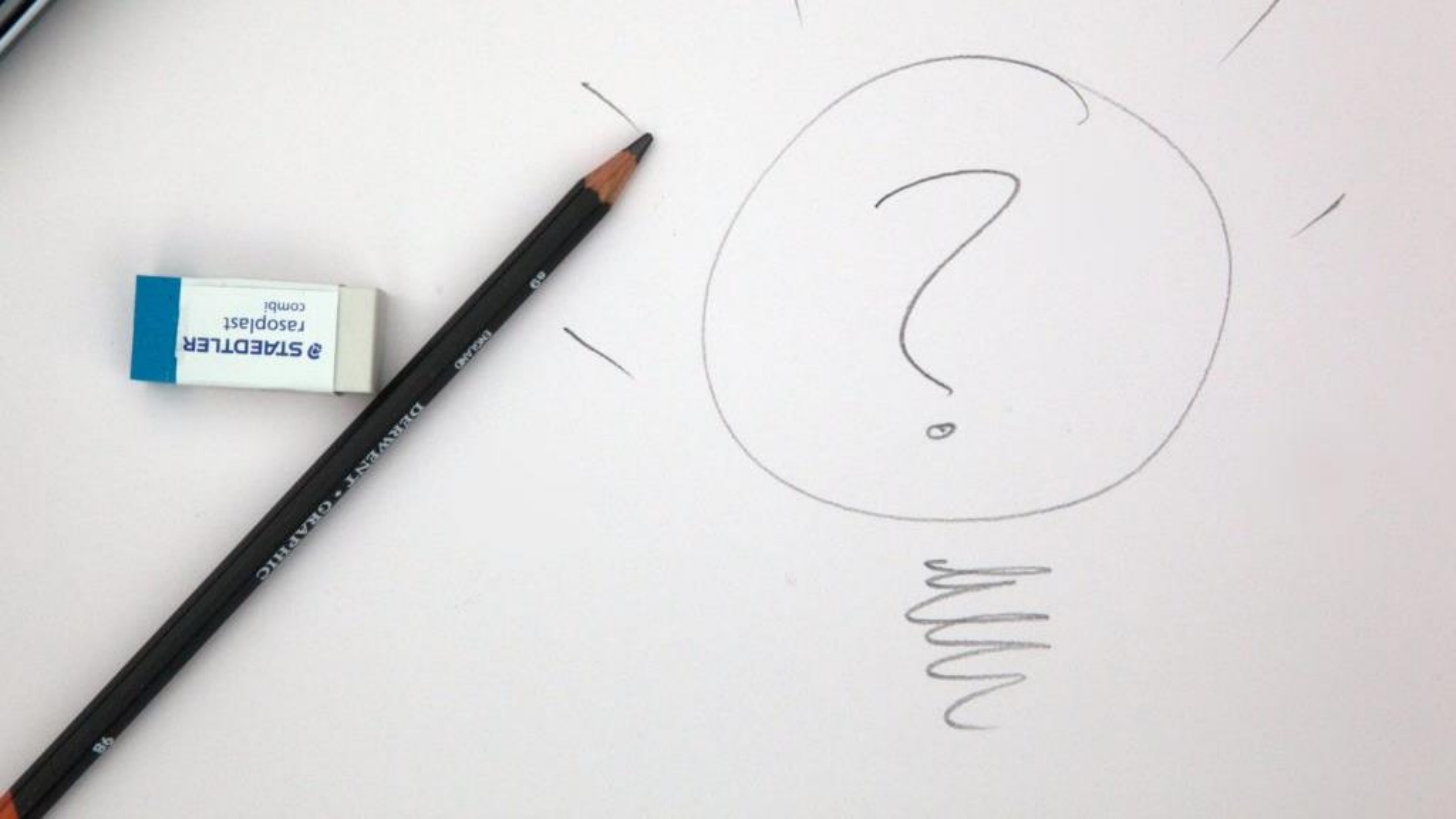

200 µm

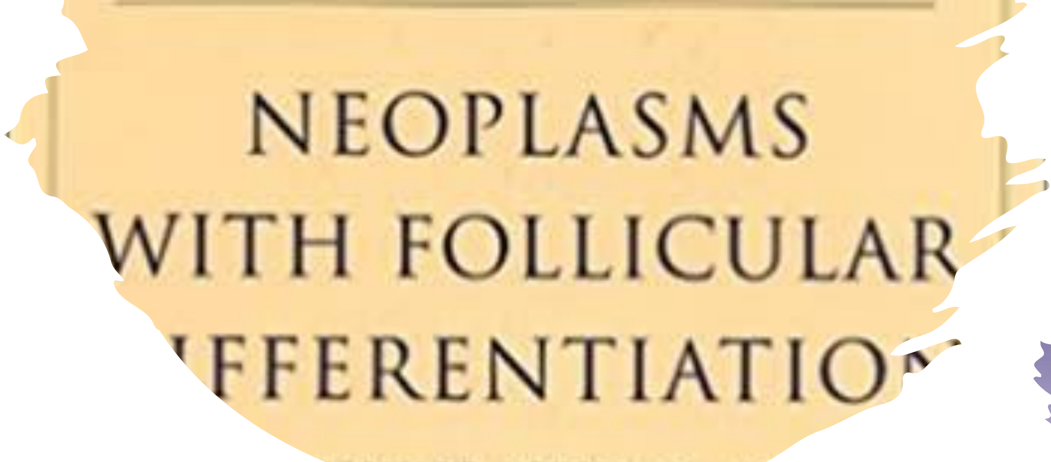

200 µm


200 μm

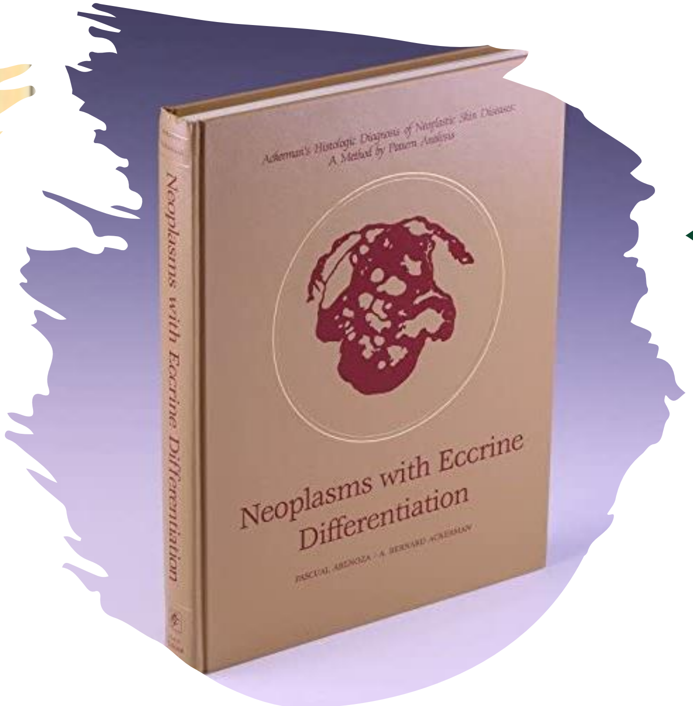

200 µm


200 µm


STAEDTLER
rasoplast
combi
DERWENT • GRAPHIC



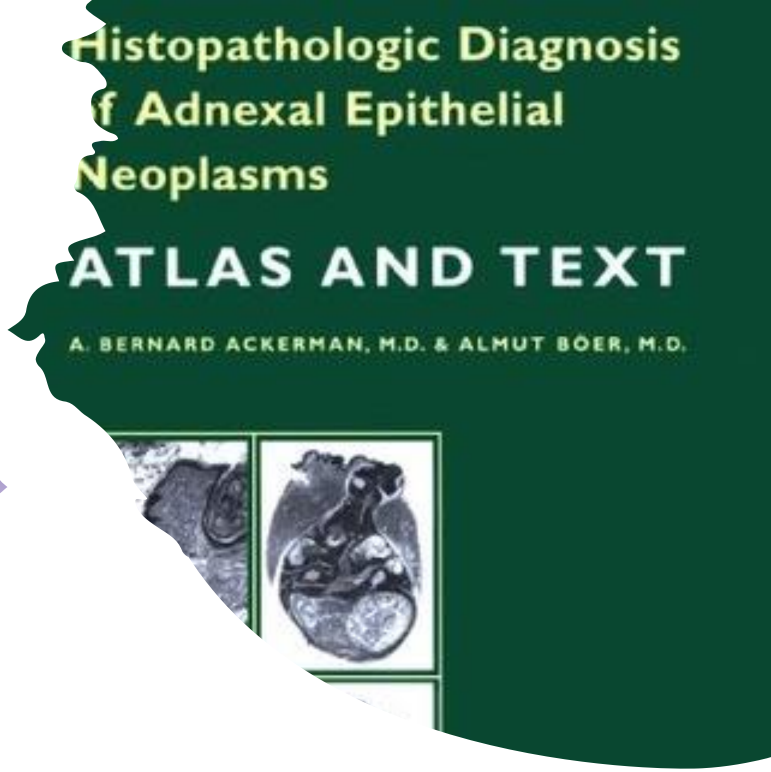
NEOPLASMS
WITH FOLLICULAR
IFFERENTIATIO
RNARD ACKERMAN,



Ackerman's Histologic Diagnosis of Neoplastic Skin Diseases:
A Method by Pattern Analysis

Neoplasms with Eccrine Differentiation

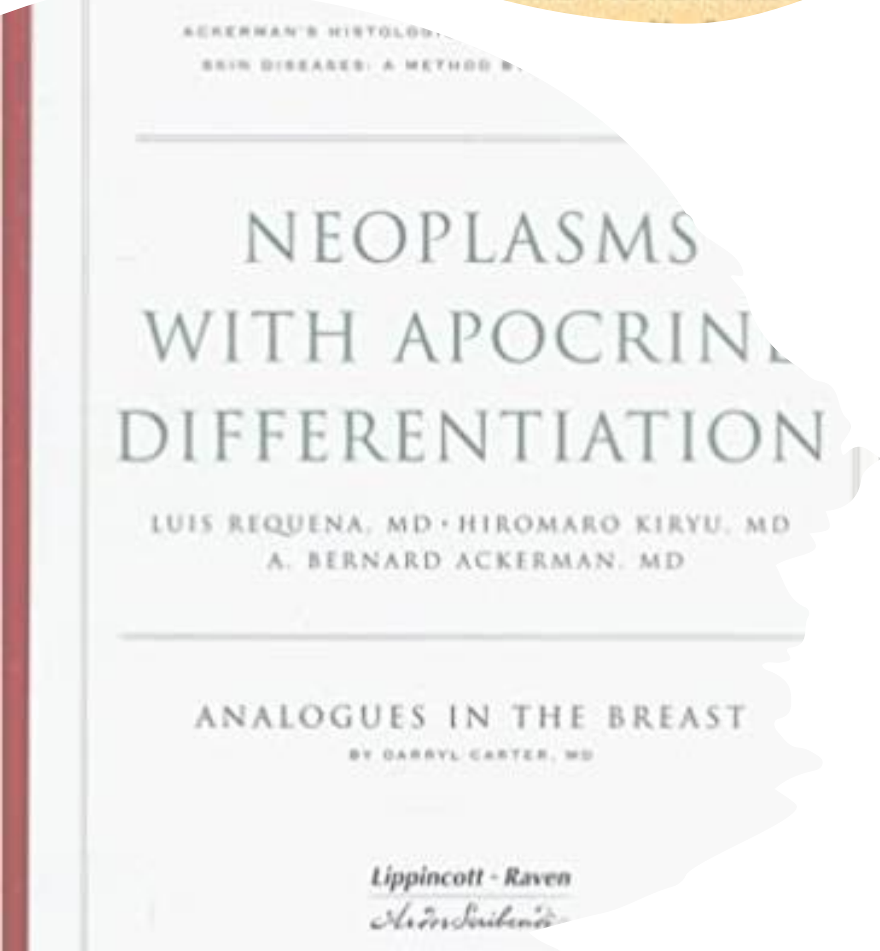
Pascual Abenoza · A. Bernard Ackerman



Histopathologic Diagnosis
f Adnexal Epithelial
Neoplasms

ATLAS AND TEXT

A. BERNARD ACKERMAN, M.D. & ALMUT BOER, M.D.



ACKERMAN'S HISTOLO
SKIN DISEASES: A METHOD B

NEOPLASMS
WITH APOCRIN
DIFFERENTIATION

LUIS REQUENA, MD · HIROMARO KIRYU, MD
A. BERNARD ACKERMAN, MD

ANALOGUES IN THE BREAST
BY DARRYL CARTER, MD

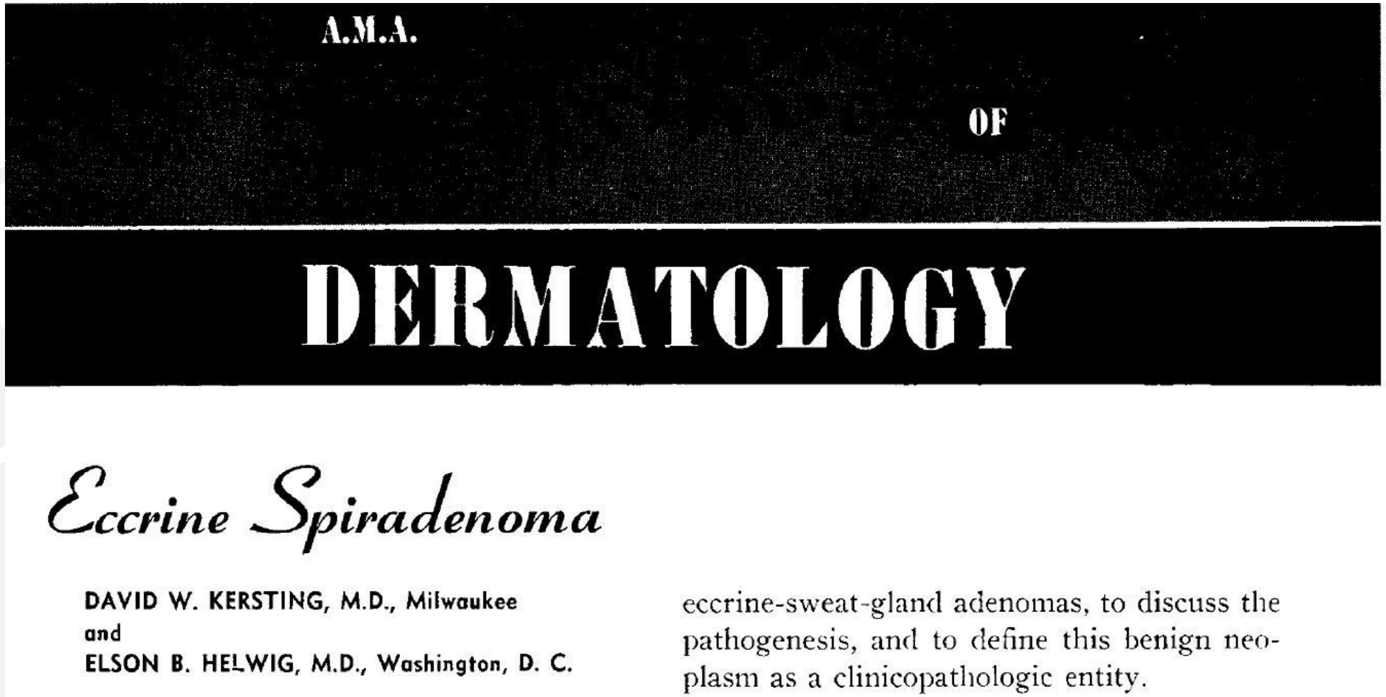
Lippincott - Raven

?

Cutaneous Adnexal Neoplasm

Spiradenoma

- From Greek elements that mean neoplasia **(-oma)** of the coil **(Spir-)** of a gland **(aden-).**
- Unna (1850-1929) employed the term (*spiradenomas*) for benign proliferations of epithelial cells that he thought were derived from eccrine glands.
- *Kersting and Helwig* are first to coin the term (eccrine spiradenoma) as a designation for specific entity in 1965.



A.M.A.

OF

DERMATOLOGY

Eccrine Spiradenoma

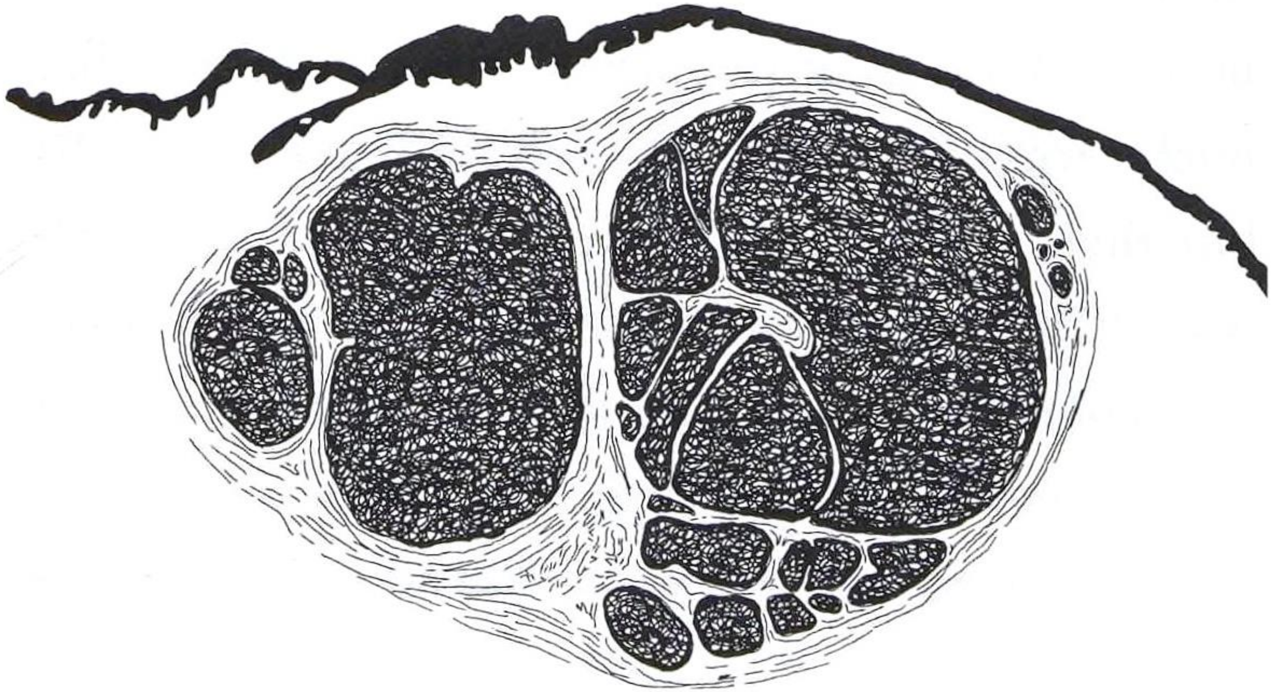
DAVID W. KERSTING, M.D., Milwaukee
and
ELSON B. HELWIG, M.D., Washington, D. C.

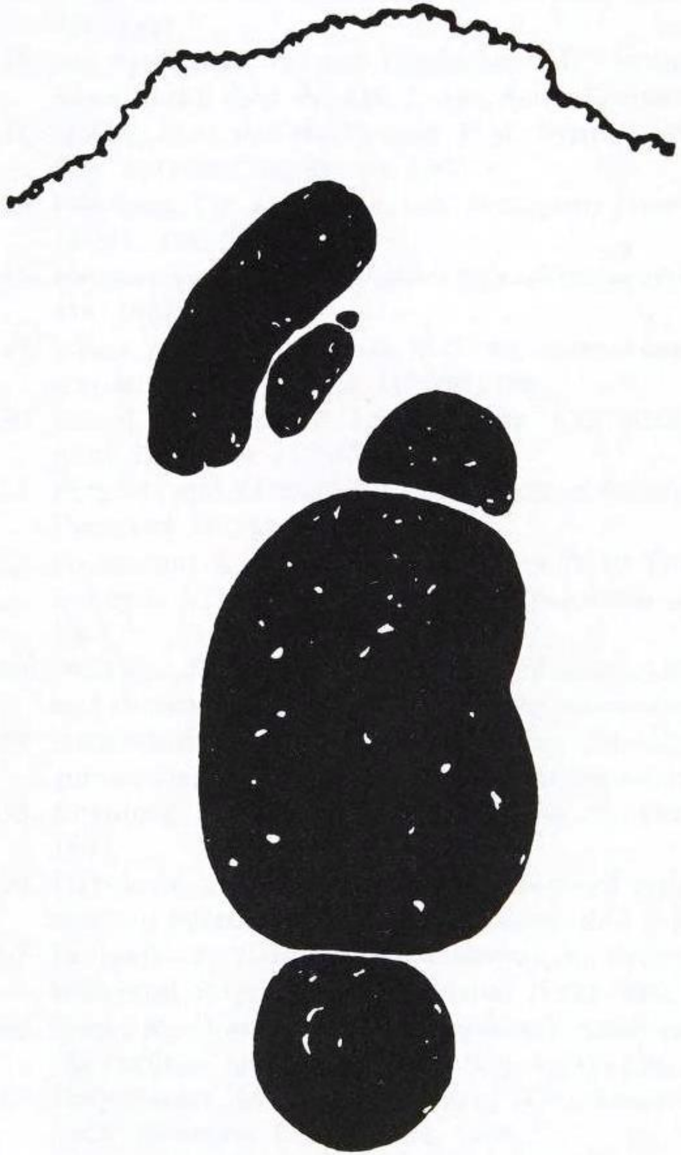
eccrine-sweat-gland adenomas, to discuss the pathogenesis, and to define this benign neoplasm as a clinicopathologic entity.

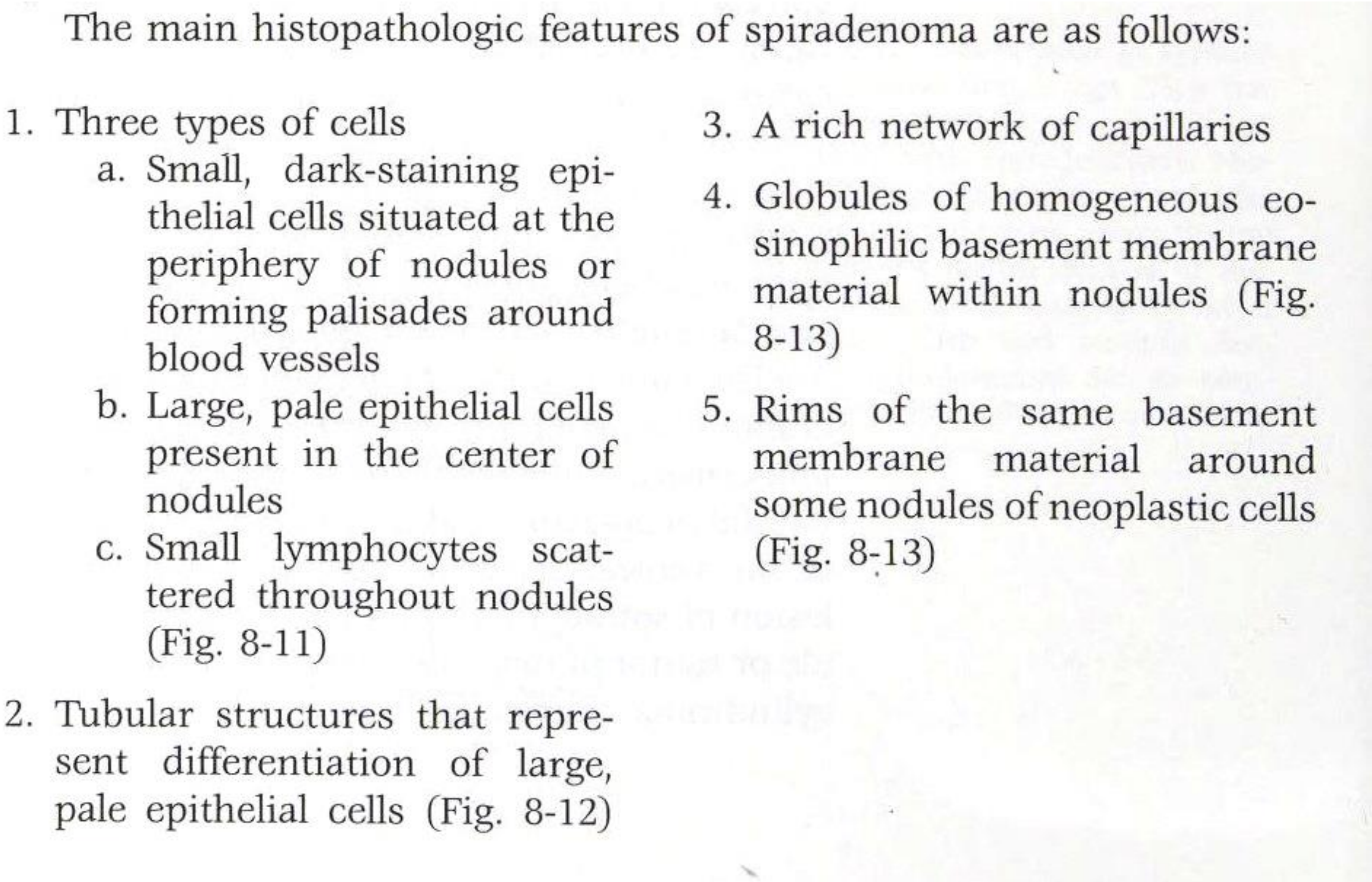
Histopathologic findings

- With scanning magnification a spiradenoma consists of one to about ten, sharply circumscribed, ovoid nodules situated in the dermis and often in the subcutaneous fat.

- The nodules may be wholly solids or may contain tubular and cystic structures. The periphery of many nodules are surrounded by a rim of fibrous tissue that has been compressed because of slow and steady growth.
- Artifectual clefts are seen immediately peripheral to the zone of compressed fibrous tissue and between it and the compressed fibrous tissue and between it and the normal dermis.
- A vertical orientation of the neoplasm is more common than horizontal position.







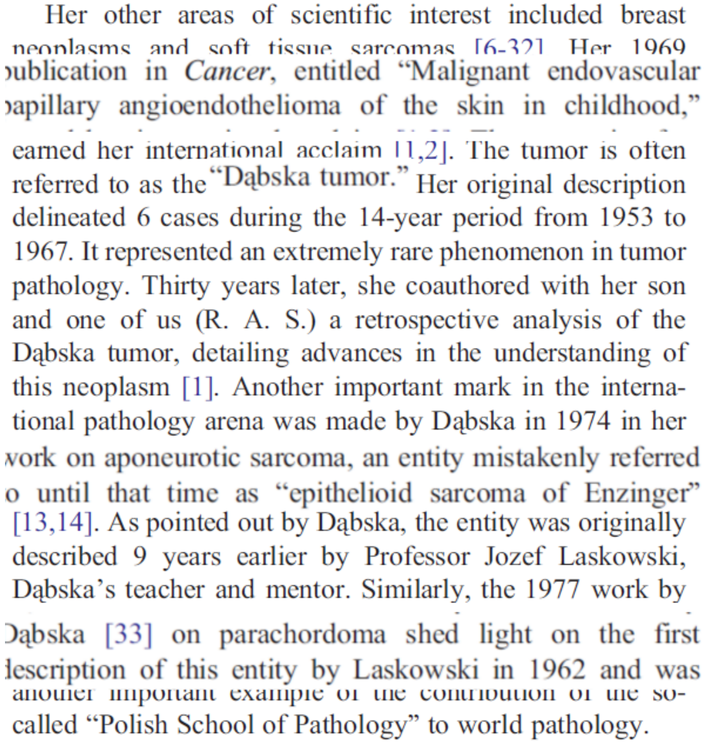
The main histopathologic features of spiradenoma are as follows:

1. Three types of cells
   a. Small, dark-staining epithelial cells situated at the periphery of nodules or forming palisades around blood vessels
   b. Large, pale epithelial cells present in the center of nodules
   c. Small lymphocytes scattered throughout nodules (Fig. 8-11)
2. Tubular structures that represent differentiation of large, pale epithelial cells (Fig. 8-12)
3. A rich network of capillaries
4. Globules of homogeneous eosinophilic basement membrane material within nodules (Fig. 8-13)
5. Rims of the same basement membrane material around some nodules of neoplastic cells (Fig. 8-13)

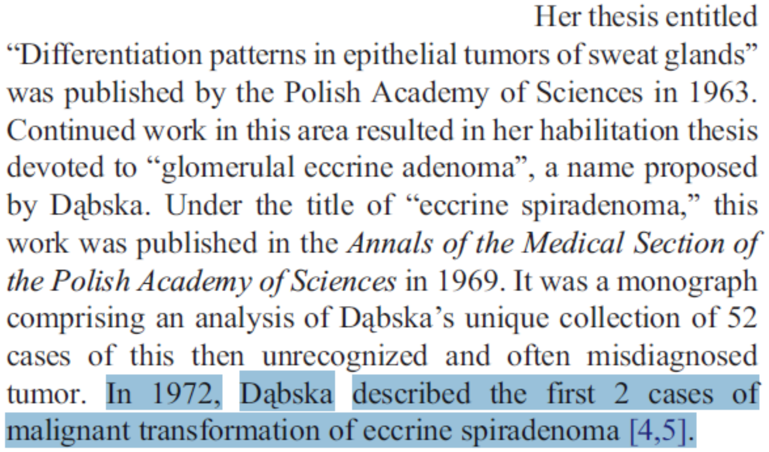
- Neoplastic cells may be arranged in structures like ribbons, trabecular or reticulated pattern and sometimes in solid pattern i.e., devoid of any pattern.
- Petaloid pattern is the arrangement of aggregations of neoplastic cells in a floral arrangement

Spiradenocarcinoma

- A rare neoplasm, first described by Maria Dąbska in *Polish Medical Journal*; 1972.
- Only 33 authentic examples in 32 patients could be found in a review of a literature.
- In most instances, spiradenocarcinoma begins in a longstanding spiradenoma, mostly in extremities of females.



Her other areas of scientific interest included breast neoplasms and soft tissue sarcomas [6-32]. Her 1969 ublication in *Cancer*, entitled “Malignant endovascular apillary angioendothelioma of the skin in childhood,” earned her international acclaim [1,2]. The tumor is often referred to as the “Dąbska tumor.” Her original description delineated 6 cases during the 14-year period from 1953 to 1967. It represented an extremely rare phenomenon in tumor pathology. Thirty years later, she coauthored with her son and one of us (R. A. S.) a retrospective analysis of the Dąbska tumor, detailing advances in the understanding of this neoplasm [1]. Another important mark in the international pathology arena was made by Dąbska in 1974 in her vork on aponeurotic sarcoma, an entity mistakenly referred o until that time as “epithelioid sarcoma of Enzinger” [13,14]. As pointed out by Dąbska, the entity was originally described 9 years earlier by Professor Jozef Laskowski, Dąbska’s teacher and mentor. Similarly, the 1977 work by Dąbska [33] on parachordoma shed light on the first lescription of this entity by Laskowski in 1962 and was another important example of the contribution of the so-called “Polish School of Pathology” to world pathology.



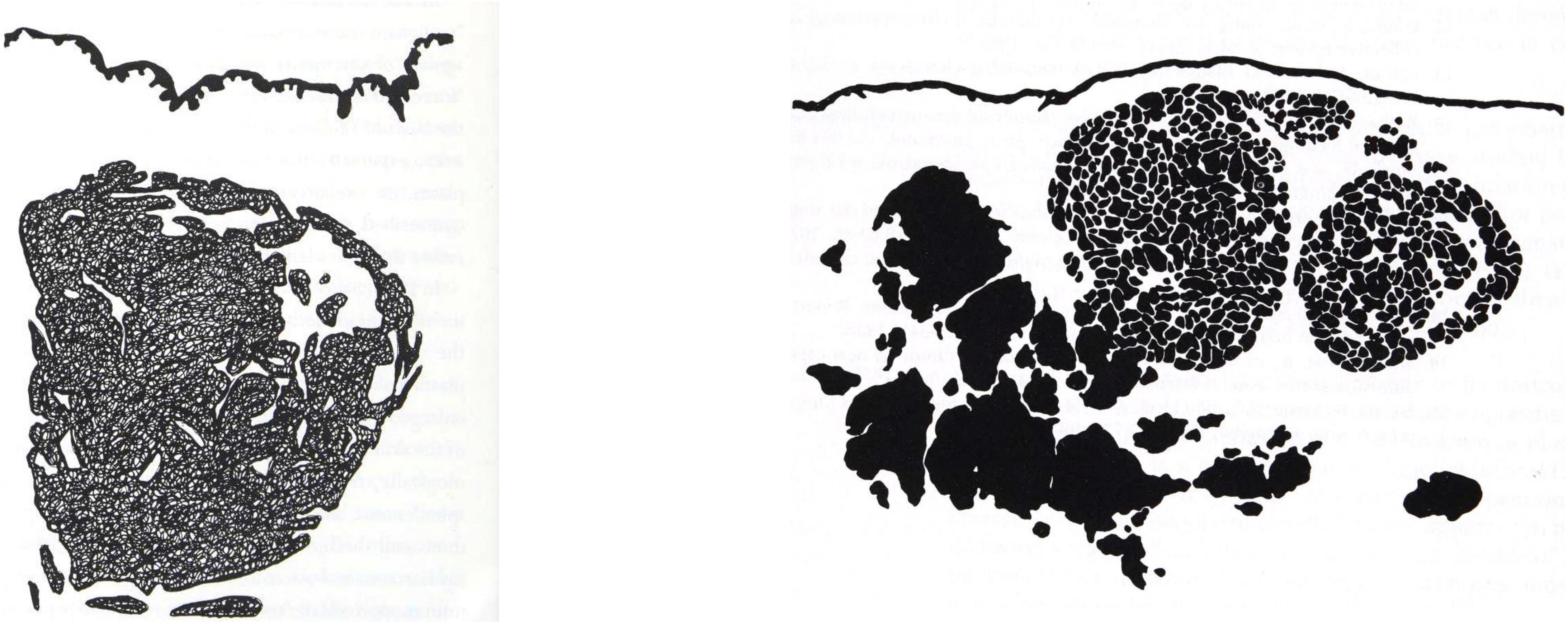
Her thesis entitled “Differentiation patterns in epithelial tumors of sweat glands” was published by the Polish Academy of Sciences in 1963. Continued work in this area resulted in her habilitation thesis devoted to “glomerular eccrine adenoma”, a name proposed by Dąbska. Under the title of “eccrine spiradenoma,” this work was published in the *Annals of the Medical Section of the Polish Academy of Sciences* in 1969. It was a monograph comprising an analysis of Dąbska’s unique collection of 52 cases of this then unrecognized and often misdiagnosed tumor. In 1972, Dąbska described the first 2 cases of malignant transformation of eccrine spiradenoma [4,5].

Spiradenocarcinoma

range histopathologically from
very well differentiated to *undifferentiated*.

Well differentiated:

- ✓ Exhibit numerous features in common with spiradenoma.
- ✓ The neoplasm can be determined to be a carcinoma rather than adenoma by:



- It’s asymmetry and poor circumscription at least in foci.
- Disordered arrangement of both tubular structures and aggregations of neoplastic cells.
- Marked variation in size and shape of aggregates of neoplastic cells.
- Marked variation in the size and shape of the lumen of tubules.
- Presence of numerous necrotic neoplastic cells and of necrosis in masse of them.
- Finding of cords and strands of neoplastic cells.

Undifferentiated

can only be identified if there is continuity between it and zones of well differentiated spiradenocarcinomas or with a pre-existing spiradenoma.

- ***Anaplastic form:***

Sheets of strikingly abnormal neoplastic cells that harbor large round or oval nuclei

Many neoplastic cells are in mitosis and many are necrotic with zones of necrosis en masse.

- ***Sarecomatous***

Short fascicles of oval neoplastic cells that tend to interwave in storiform pattern

So; the final diagnosis is:

Spiradenocarcinoma

thank you